

# Exhibit 41

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

NOKIA CORPORATION, )  
)  
Plaintiff, )  
)  
v. )  
)  
APPLE INC., )  
)  
Defendant. )

C.A. No. 09-791 (GMS)

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APPLE INC., )  
)  
Counterclaim Plaintiff, )  
)  
v. )  
)  
NOKIA CORPORATION and NOKIA INC., )  
)  
Counterclaim Defendants. )

**NOKIA'S SUPPLEMENTAL RESPONSE TO APPLE'S INTERROGATORY NO. 12**

Pursuant to Rules 26 and 33 of the Federal Rules of Civil Procedure and the Local Rules of this Court, Plaintiff and Counterclaim-Defendant Nokia Corporation and Counterclaim-Defendant Nokia Inc. (collectively referred to as "Nokia") hereby provide its supplemental response to Defendant and Counterclaim-Plaintiff Apple Inc.'s ("Apple's") Interrogatory No. 12 to Nokia.

Nokia hereby incorporates by reference its Responses and Objections to Apple's Second Set of Interrogatories, served on July 22, 2010.

The information set forth in this Supplemental Response is information available to Nokia as of the date of this Response; however, discovery is ongoing and Nokia may discover or develop additional materials or responses as this matter progresses.

## SPECIFIC OBJECTIONS

### INTERROGATORY NO. 12:

To the extent Nokia contends that any claim of the Apple Patents-In-Suit is invalid under 35 U.S.C. §§ 101, 102, 103, and/or 112, then, separately for each such claim, state the basis for any such invalidity contention, including in your answer:

(a) The identity of each item of prior art that allegedly anticipates each asserted claim or renders it obvious. Each prior art patent shall be identified by its number, country of origin, and date of issue. Each prior art publication shall be identified by its title, date of publication, and, where feasible, author and publisher. Public knowledge or use that is prior art under 35 U.S.C. § 102(a) shall be identified by describing the knowledge or use in detail, including the date(s) of the public knowledge or use, the identity of each person or entity having the public knowledge or involved in the public use, and the place(s) at which the public knowledge or use took place. Prior art under 35 U.S.C. § 102(b) shall be identified by specifying the product offered for sale or describing the public use and product involved therein, the date the offer or use took place, and the identity of each person or entity involved in the use or that made or received the offer, and each person or entity to whom the use was known. Prior art under 35 U.S.C. § 102(f) shall be identified by providing the identities of the person(s) or entities involved in and the circumstances surrounding the making of the invention before the patent applicant(s).

(b) Whether each item of prior art anticipates each asserted claim or renders it obvious. If obviousness is alleged, an explanation of why the prior art renders the asserted claim obvious, including any identification of all combinations of prior art showing obviousness.

(c) A chart identifying where specifically in each alleged item of prior art each limitation of each asserted claim is found, including for each limitation that such party contends is governed by 35 U.S.C. § 112(6), the identity of the structure(s), act(s) or material(s) in each item of prior art that performs the claimed function.

(d) A detailed description of the claim construction used by Nokia to compare any prior art to a claim, including the identification of any intrinsic and/or extrinsic evidence supporting Nokia's claim construction.

(e) Nokia's contention concerning the applicable level of ordinary skill in the art.

(f) Nokia's contention as to whether the validity of the claim is affected by any secondary considerations of non-obviousness, including without limitation, considerations of commercial success, long felt need, failures of others, copying, licensing, and skepticism of the patented invention, and further identify the basis for any such secondary considerations.

(g) Any grounds of invalidity based on 35 U.S.C. § 101, indefiniteness under 35 U.S.C. § 112(2) or enablement or written description under 35 U.S.C. § 112(1) of any of the asserted claims.

(h) The identity of all persons with knowledge concerning the basis for each of your contentions.

(i) The identification of all documents that relate to, support, or detract from the basis for each of your contentions.

**SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 12:**

Nokia hereby incorporates its Reservation of Rights, General Objections and its Objections to Apple's Definitions and Instructions as set forth in Nokia's July 22, 2010 Response to Apple's Second Set of Interrogatories. Nokia objects to this Interrogatory to the extent it seeks information that is protected by the attorney-client privilege, the attorney work-product doctrine, the joint defense privilege, the common interest privilege, and/or any other applicable doctrine of privilege or immunity. Nokia further objects to this Interrogatory as overly broad and unduly burdensome to the extent it purports to require an identification of any person with relevant knowledge without limiting it to persons most knowledgeable about specifically identified topics or anticipated witnesses. Nokia further objects to this Interrogatory as premature to the extent it seeks information that is appropriately the subject of expert opinion and testimony before Nokia is required to identify and provide such in accordance with the Scheduling Order issued in this litigation. Nokia further objects to this Interrogatory on the grounds that it calls for legal contentions and conclusions. Nokia further objects to this Interrogatory on the ground that the phrase "person or entity involved in the use" is vague and indefinite. Pursuant to Local Rule 26.1(a), Nokia asserts that this Interrogatory constitutes at least 4 subparts. Nokia is only obligated to respond to the first 50 Interrogatories (including subparts) served by Apple (*see* D.I. 33 at 11).

Subject to and without waiving Nokia's General and Specific Objections to this Interrogatory, Nokia responds that it has not yet completed its investigation into the validity of the claims of the Apple Patents-in-Suit, but that such claims are invalid for failing to satisfy one

or more of the conditions for patentability set forth in 35 U.S.C. §§ 101, 102, 103 and 112. Nokia may rely on testimony of expert witnesses knowledgeable regarding the invalidity of the asserted claims of the Apple Patents-in-Suit and will disclose the identity of such expert witnesses at such time as required by the applicable rules of the Court and the Scheduling Order.

Nokia also states that claims of the Apple Patents-in-Suit are invalid pursuant to 35 U.S.C. §§ 102 and/or 103 for at least the reasons stated in the Requests for Reexamination attached hereto as Exhibits A through I. These documents provide detailed information regarding the invalidity of the Apple Patents-in-Suit, but are not exhaustive.

Moreover, Nokia has discovered numerous prior art references which are pertinent to the claims of the Apple Patents-in-Suit. Nokia has attached a list of these references as Exhibit J to this Supplemental Response. Nokia reserves the right to provide additional contentions based on the references listed in Exhibit J or other references not yet identified.

To the extent the references cited in the attached Exhibits do not anticipate certain claims of the Apple Patents-in-Suit under 35 U.S.C. § 102, Nokia further reserves the right to rely on expert testimony to: (1) establish a motivation to combine prior art references, to the extent such motivation is still necessary in light of *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (April 30, 2007), and (2) to establish that the purported invention described in the claims are nothing more than predictable variations of the prior art, and that it would have been obvious to one of ordinary skill in the art, through common sense and creativity, to combine the cited and other references.

In compiling the information in the attached Exhibits, Nokia afforded the claims of the Apple Patents-in-Suit the broadest reasonable interpretation to which they are entitled. Nothing contained in this response or in the attached Exhibits A through J is intended to reflect any

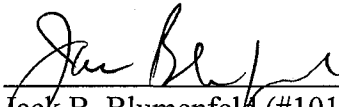
position regarding the proper construction of any claim term in any claim. Nokia reserves the right to amend its response in light of any claim construction order entered in this litigation.

Nokia is conducting an ongoing reasonable search and investigation for information responsive to this Interrogatory. Nokia may supplement, from time to time, its Response to this Interrogatory to the extent responsive, non-privileged information is identified. Nokia specifically notes that discovery is ongoing, that Apple's document production is not complete, and that no technical depositions, including named inventor or prosecuting attorney depositions, have taken place. In addition, Nokia's investigation is not complete, the parties have not submitted expert reports, and the claims of the asserted patents have not been construed as a matter of law. Nokia reserves the right to supplement its response to this interrogatory to reflect additional information learned in discovery, including documents and information produced by Apple in response to Nokia's discovery requests relating to prior art Apple systems. Nokia also reserves the right to supplement with information obtained as part of its ongoing investigation of Apple's infringement allegations.

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November 15, 2010  
3903056

**CERTIFICATE OF SERVICE**

I hereby certify that copies of the foregoing were caused to be served on  
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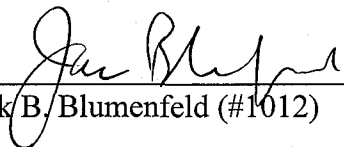
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# EXHIBIT F



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:           Ording  
U.S. Patent No.:           7,469,381  
Issued:                        December 23, 2008  
Group Art Unit:            2174  
Serial No:                    11/956,969  
Examiner:                    B. Pesin  
Filed:                        December 14, 2007  
For:                          LIST SCROLLING AND DOCUMENT TRANSLATION,  
                                  SCALING, AND ROTATION ON A TOUCH-SCREEN  
                                  DISPLAY  
Attorney Docket No.        0919/01028

April 28, 2010

Mail Stop *Ex Parte* Reexam  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**REQUEST FOR REEXAMINATION**

Reexamination of United States Patent 7,469,381 (hereinafter, “the ’381 patent”), which issued December 23, 2008 to Ording is requested under 35 U.S.C. §§ 302-307, and under 37 C.F.R. § 1.510. This patent is still in force.<sup>1</sup> A copy of the patent in accordance with 37 C.F.R. § 1.510(b)(4) is submitted herewith as Exhibit A. Related continuation applications are pending<sup>2</sup>.

**I. Claims for which Reexamination is Requested**

The ’381 patent describes a computer-implemented method according to which an electronic document displayed on a touch screen may be translated to display different portions of the document, and if an edge of the document is reached while translating, an area beyond the edge of

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<sup>1</sup> Indeed, a counterclaim for alleged infringement of the ’381 patent has been filed in the U.S. District Court for the District of Delaware, *Nokia Corp. v. Apple Inc.*, Case No. 1:09-cv-00791-GMS. That litigation is in its early stages and no discovery regarding the ’381 patent has taken place. If the litigation proceeds, third party requester expects there will be a challenge to the validity of the ’381 patent therein.

<sup>2</sup> Application Serial Nos. 12/270,810 filed on 11-13-2008, 12/270,812 filed on 11-13-2008, 12/270,815 filed on 11-13-2008, 12/270,805 filed on 11-13-2008, and 12/270,807 filed on 11-13-2008.

the document is displayed and then no longer displayed, in the particular manner claimed.

Reexamination is requested of all Claims 1-20 of the '381 patent.

## **II. Statement of Substantial New Questions of Patentability**

### **A. The Subject Matter of Claim 1-20**

Claims 1-20 recite:

1. A computer-implemented method, comprising:  
a device with a touch screen display: displaying a first portion of an electronic document;  
detecting a movement of an object on or near the touch screen display;  
in response to detecting the movement, translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion;  
in response to an edge of the electronic document being reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display: displaying an area beyond the edge of the document, and displaying a third portion of the electronic document, wherein the third portion is smaller than the first portion; and in response to detecting that the object is no longer on or near the touch screen display, translating the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion.
2. The computer-implemented method of claim 1, wherein the first portion of the electronic document, the second portion of the electronic document, the third portion of the electronic document, and the fourth portion of the electronic document are displayed at the same magnification.
3. The computer-implemented method of claim 1, wherein the movement of the object is on the touch screen display.
4. The computer-implemented method of claim 1, wherein the object is a finger.
5. The computer-implemented method of claim 1, wherein the first direction is a vertical direction, a horizontal direction, or a diagonal direction.
6. The computer-implemented method of claim 1, wherein the electronic document is a web page.

7. The computer-implemented method of claim 1, wherein the electronic document is a digital image.

8. The computer-implemented method of claim 1, wherein the electronic document is a word processing, spreadsheet, email or presentation document.

9. The computer-implemented method of claim 1, wherein the electronic document includes a list of items.

10. The computer-implemented method of claim 1, wherein the second direction is opposite the first direction.

11. The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching an edge of the document has an associated speed of translation that corresponds to a speed of movement of the object.

12. The computer-implemented method of claim 1, wherein translating in the first direction is in accordance with a simulation of an equation of motion having friction.

13. The computer-implemented method of claim 1, wherein the area beyond the edge of the document is black, gray, a solid color, or white.

14. The computer-implemented method of claim 1, wherein the area beyond the edge of the document is visually distinct from the document.

15. The computer-implemented method of claim 1, wherein translating the document in the second direction is a damped motion.

16. The computer-implemented method of claim 1, wherein changing from translating in the first direction to translating in the second direction until the area beyond the edge of the document is no longer displayed makes the edge of the electronic document appear to be elastically attached to an edge of the touch screen display or to an edge displayed on the touch screen display.

17. The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching the edge of the electronic document has a first associated translating distance that corresponds to a distance of movement of the object prior to reaching the edge of the electronic document; and wherein displaying an area beyond the edge of the electronic document comprises translating the electronic document in the first direction for a second associated translating distance, wherein the second associated translating distance is less than a distance of movement of the object after reaching the edge of the electronic document.

18. The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching the edge of the electronic document has a first associated translating speed that

corresponds to a speed of movement of the object, and wherein displaying an area beyond the edge of the electronic document comprises translating the electronic document in the first direction at a second associated translating speed, wherein the second associated translating speed is slower than the first associated translating speed.

19. A device, comprising:

a touch screen display;

one or more processors;

memory; and

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

instructions for displaying a first portion of an electronic document;

instructions for detecting a movement of an object on or near the touch screen display;

instructions for translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion, in response to detecting the movement;

instructions for displaying an area beyond an edge of the electronic document and displaying a third portion of the electronic document, wherein the third portion is smaller than the first portion, in response to the edge of the electronic document being reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display; and

instructions for translating the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion, in response to detecting that the object is no longer on or near the touch screen display.

20. A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:

display a first portion of an electronic document;

detect a movement of an object on or near the touch screen display;

translate the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion, in response to detecting the movement;

display an area beyond an edge of the electronic document and display a third portion of the electronic document, wherein the third portion is smaller than the first portion, if the edge of the electronic document is reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display; and

translate the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion, in response to detecting that the object is no longer on or near the touch screen display.

In reexamination, as with any proceeding before the U.S. Patent and Trademark Office (“USPTO”), the terms and phrases of a claim are given their broadest reasonable construction. *E.g.*, *In re American Academy of Science Tech Center*, 367 F.3d 1359, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004) (“During examination, ‘claims ... are to be given their broadest reasonable interpretation . . . .’” (*quoting In re Bond*, 910 F.2d 831, 833, 15 USPQ2d 1566 (Fed. Cir. 1990))).

#### **B. Newly cited Prior Art**

The '381 patent matured from a U.S. patent application filed December 14, 2007, and claims priority to the filing dates of U.S. Provisional Patent Application Nos. 60/937,993, "Portable Multifunction Device," filed Jun. 29, 2007; 60/946,971, "List Scrolling and Document Translation, Scaling, and Rotation on a Touch-Screen Display," filed Jun. 28, 2007; 60/945,858, "List Scrolling and Document Translation on a Touch-Screen Display," filed Jun. 22, 2007; 60/879,469, "Portable Multifunction Device," filed Jan. 8, 2007; 60/883,801, "List Scrolling and Document Translation on a Touch-Screen Display," filed Jan. 7, 2007; and 60/879,253, "Portable Multifunction Device," filed Jan. 7, 2007. Therefore, the “Critical Date” for prior art relevant to the claims of the '381 patent, under 35 U.S.C. § 102(b) is no earlier than January 7, 2006, if one of the provisional applications filed on that date fully supports the claims. Third party requester does not reach this question as the prior art asserted herein was published prior to January 7, 2006.

The requester respectfully submits that the prior art, under §§ 102(b) taught or suggested the subject matter of the claims of the '381 patent. More particularly, the requester submits that:

- C. Forlines, C. Shen, B. Buxton, "Glimpse: A Novel Input Model for Multi-Level Devices, CHI '05 (Conference on Human Factors in Computing Systems) extended abstracts on Human factors in computing systems (Association for Computing Machinery 2005) pages 1375-78 ("the Glimpse article") (Exhibit B);

in view of :

- M. Millhollon, K. Murray, Microsoft Office Word 2003 Inside Out (Microsoft Press 2004) pages 13-16, 93, 762-65, 802-04 ("Inside Out") (Exhibit C);

and for some proposed grounds of rejection:

- U.S. Patent Application Publication No. 2005/0195154 to Robbins et al. ("the Robbins application") (Exhibit D);
- U.S. Patent No. 6,690,387 to Zimmerman et al. ("the Zimmerman patent") (Exhibit E).

rendered the subject matter of the claims of the '381 patent obvious to one of ordinary skill in the relevant art.

Furthermore, the requester notes that the Glimpse Article, Inside Out, and the Robbins application were not listed on the face of the '381 patent. Consequently, the Glimpse Article, Inside Out, and the Robbins application are newly applied and unquestionably raise new questions of patentability.

### **C. Basis for Substantial New Questions of Patentability**

Claims 1-20 of the '381 patent do not patentably distinguish over combinations of the above-noted newly cited references. In summary, the Glimpse article discloses a computer-implemented navigation method for a Tablet PC touch screen in which a user can, by finger or stylus, without

disengagement from the screen, (a) view an initial (first) portion of an electronic document, (b) translate the document from the first portion to display a different second portion, which can be selected to be any portion of the document, (c) store the second portion in an undo stack, (d) translate the document to display a third portion, and (e) release contact with the screen, whereupon the system automatically restores the view stored in the undo stack, that is, the second portion, which is different from the initial view. (Exhibit B, pp. 1375-78).

Inside Out discloses features of Microsoft Word 2003, including the well-known Print Layout View of electronic documents, which it recommends for Tablet PCs. In Print Layout View, upon scrolling to an edge of the document, an area beyond the edge is displayed in a manner visually contrasting with the document. (Exhibit C, pp. 762-65).

The Robbins application discloses moving from one view to another on a touch screen device by “spring-loaded” animation, and animating back to the initial view upon release, which implies retracing the original motion, as in stretching a spring and then allowing it to retract in the opposite direction. (Exhibit D, ¶¶ 9, 71, 75, 86).

The Zimmerman patent discloses that the panning speed of an electronic document (a list is a disclosed example) corresponds to the speed of motion of a user’s finger on the touch screen while the user maintains contact with the screen. When the user breaks contact, the list continues translating but the speed then decreases at a controlled rate until it reaches zero or a predetermined minimum speed (Exhibit E, Abstract; col. 4 ln. 7-37), a motion those skilled in the art would have recognized as a damped motion. (The ’381 patent specification refers at column 20, lines 37-46 to: “simulation of a physical device having friction, i.e., damped motion . . . .”)

Thus, the Glimpse article discloses or would have rendered obvious each element of Claims 1- 20 of the ’381 patent, implemented on a touch screen device, except displaying an area beyond an edge of the document in response to reaching the edge, damping translation speed in certain

circumstances, and certain additional dependent claim limitations discussed below. Inside Out discloses displaying an area beyond an edge of the document in response to reaching the edge while translating the document, on a touch screen device. One skilled in the art would have found a clear motivation to modify the Glimpse article with the teachings of Inside Out, since both references refer to using their teachings on a TabletPC, a touch screen device. The result of applying the described teaching from Inside Out to the Glimpse article's method was predictable, namely, on translating and reaching an edge of a document (for example by a user's finger), an area beyond the edge would be displayed until the user or the system translated the document to display a portion away from the edge. The Robbins application's spring-loaded return animation provides further motivation to reverse direction when returning to a previously viewed portion of the document on disengaging the finger from the screen.

Modifying the Glimpse article method in view of Inside Out would have been obvious because it would have been merely the application of a known technique (displaying an area beyond the edge when the edge is reached during translation) to a known method (the Glimpse method that meets all the other claim limitations but fails to specify what should happen on reaching an edge) to achieve a predictable result. Further, one skilled in the art had only a finite number of choices of known techniques for displaying a document upon reaching an edge of the document. One could simply stop the document, display some sort of separate flag or visual to indicate the edge had been reached, or display an area beyond the edge, as taught by Inside Out and well known in the use of Microsoft Word's print layout view. It would have been obvious to try the Inside Out approach when reaching the edge of a document in a document display and navigation system according to the Glimpse article.<sup>3</sup>

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<sup>3</sup> MPEP § 2143 (D), (E) Examples of Basic Requirements of a *Prima Facie* Case of Obviousness, citing *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385, 1395-97 (2007).



Despite the failure of the original prosecution history to explicitly disclose the examiner's reasons for rejecting the original claims, the examiner clearly considered prior art<sup>4</sup> that rendered unpatentable a claim requiring displaying an area beyond the edge upon translating a document to reach the edge, and, when the object is no longer detected on or near the screen, translating the document in a second direction until the area beyond the edge is no longer displayed. It is clear also from the same prior art of record that the examiner did not believe that the so-called appearance of elastic attachment of the document edge to an edge of the screen, or an edge displayed on the screen, provided patentability. The combination of the Glimpse article and Inside Out provides what apparently the examiner believed was missing in the prior art, namely, displaying: a second portion different from the first portion, a third portion smaller than the first portion, and a fourth portion different from the first portion, in combination with the other claim elements.

It would have been obvious to modify the foregoing combination of the Glimpse article and Inside Out further in view of the Zimmerman patent by incorporating Zimmerman's teaching to track finger translation speed of a digital document on a touch screen display at a speed corresponding to the speed of a finger, and then to damp the speed of translation when the finger breaks contact with the screen.

Because the Glimpse Article, Inside Out, and the Robbins application were not previously considered and are not cumulative of any reference previously considered, combination of these references necessarily raises a new, and not cumulative, question of patentability. Consequently, Reexamination of Claims 1-20 of the '381 patent must be ordered and the claims rejected.

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<sup>4</sup> See listing of art discussed in interviews on Examiner-Initiated Interview Summaries for interviews held 6/2/2008; 6/30/2008; and 8/4/2008 in Serial No. 11/956,969.

## D. Application of Prior Art References to Claims 1-20

### 1. Content of the Prior Art

#### (a) The Glimpse Article

The Glimpse article discloses panning to different portions of an electronic document using a progression of light touch to heavy touch and back again. Glimpse teaches that if a light touch is applied, a preview of a second portion of the document is displayed to the user. If the user then applies a heavy touch, the view on the screen when the heavy touch is applied becomes the new saved location. The user then returns to applying a light touch to continue previewing other portions of the document without ever breaking contact with the screen:

We describe a technique that supports the previewing of navigation, exploration, and editing operations by providing convenient Undo for unsuccessful and/or undesirable actions on multi-level input devices such as touch screens and pen-based computers. (Abstract, p. i)

Our technique would enable users to preview different magnification levels with light touch input before choosing to remain at the new level with a heavy touch or to return to a previous level by releasing. Similarly a user may click and drag using light input to pan to other portions of the document, easily able to return to their previous position. Taking a temporary glimpse at details that are too small to see clearly (in the case of zooming) or off-screen (in the case of panning) becomes a single touch operation. (p. 1377)

We have used both a TabletPC and a touch sensitive DiamondTouch surface as our pressure sensitive input device. (p. 1377)

As shown in Figure 3, our method replaces Figure 1's State 1 with a new state, which we call Glimpse. When an object is selected for editing through light pressure input, the system enters the Glimpse state and the current value of the property being edited is saved to memory [hereinafter Glimpse buffer] separate from the system's undo stack. This light pressure input indicates intent to edit the selected object. While the user continues to manipulate the object using light pressure input, the system responds by previewing the results of their action. (p. 1376-77)

When editing is finished, the user can either reject or accept the edit by performing one of two actions. If the user lifts their finger or stylus (or otherwise releases the input), the system returns to State 0 and the edit is automatically 'undone' by retrieving the saved state. When possible *we animate this undo graphically* so that the action is as clear to the user as possible. If the user increases the pressure of their input past a certain threshold, the system enters State 2 and the previewed changes to the edited object becomes the object's current state. In this transition, the previously saved values of the object are pushed onto the system's undo stack. While the user remains in State 2, changes to the object are saved as

they occur. Reentering the Glimpse state from State 2 again stores the current value of the object being edited to memory. The Glimpse state previews the further change of this value, which can again be confirmed by reentering State 2. (p. 1377) (emphasis added).

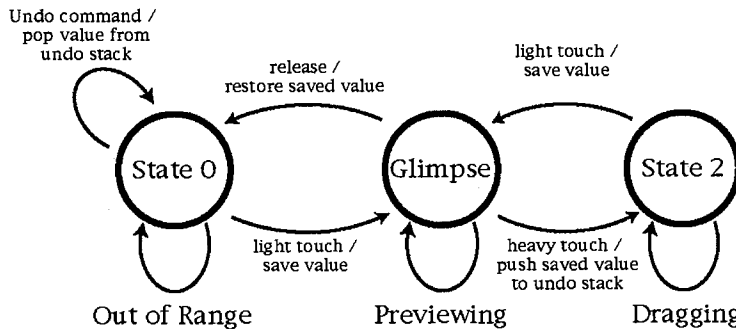


Figure 3. Glimpse enabled transition diagram for pressure sensitive direct input devices.

Glimpse discloses a user panning to display various portions of an electronic document, including a second portion, while the object is still detected on the screen with at least a light touch:

Our technique would enable users to preview different magnification levels with light touch input before choosing to remain at the new level with a heavy touch or to return to a previous level by releasing. Similarly a user may click and drag using light input to pan to other portions of the document, easily able to return to their previous position. Taking a temporary glimpse at details that are too small to see clearly (in the case of zooming) or off-screen (in the case of panning) becomes a single touch operation. (p. 1377)

The Glimpse article teaches panning and zooming techniques for navigating an electronic document. Glimpse teaches using these features separately, allowing a user to pan to different areas of a document while maintaining the same magnification. The following passage and the foregoing passage illustrate this functionality:

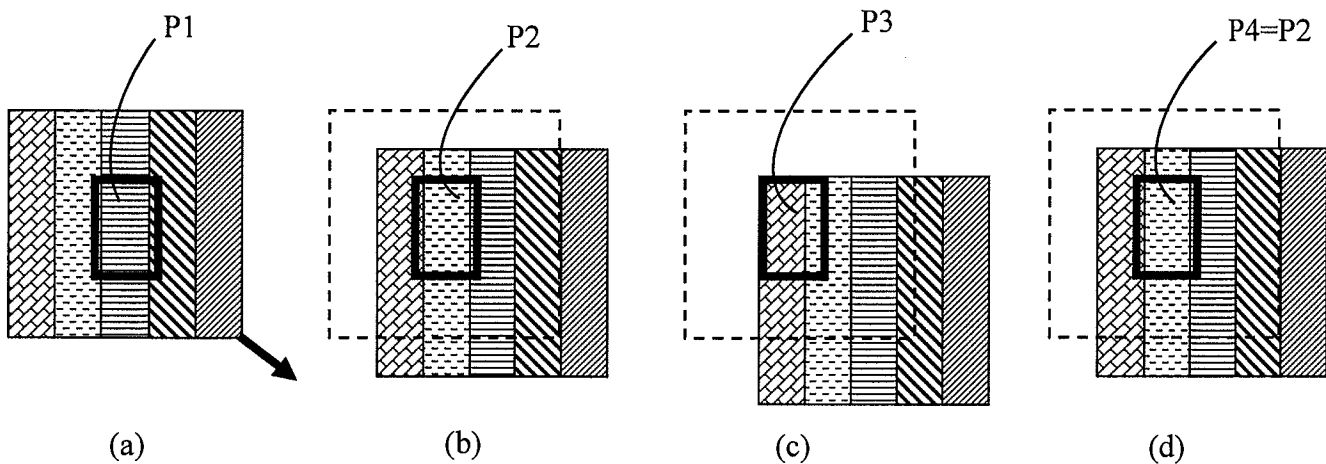
When navigating through a dataset using a pan and zoom interface, one often wants to temporarily zoom-in in order to take a more detailed look at some portion of the data before returning to the current zoom level. Using a traditional interface, zoom-in and zoom-out are separate commands (and may require the user to traverse to a tool pallet in order to switch tools). Furthermore, if zooming does not occur in fixed increments, inaccuracies in the operation of the zoom tool can make the task of returning to an exact zoom level difficult if not impossible. Similarly, for drag-to-pan movement around a dataset, retracing one’s path in order to return to a previous location can be very difficult. It is a combination of these two

difficulties that cause many users to complain that they become “lost” in the dataset when using a pan-and-zoom interface. (p. 1377).

Glimpse also teaches tracking movement of an object in contact with the pressure sensitive screen:

Any multi-state input device that also *provides tracking* (explicitly, as in the case of the pop-through mouse’s on-screen pointer, or implicitly, as in the case of a stylus or finger) can exploit this technique. (p. 1376) (emphasis added).

A mode of operation of the Glimpse system and method is shown in the sequence of diagrams below (provided by the third party requester). In the diagrams, the small black rectangle represents the screen of a touch screen device, held stationary by the user. The diagrams show the striped document in its entirety, although only a portion is visible on the screen. When the user drags her finger across the screen, the document “sticks” to the finger and moves in the same direction relative to the screen. The dashed box marks the initial position of the document.



Thus, when viewing an initial Portion P1 of an object such as a document as shown in diagram (a), the user could translate the document by moving a finger with a light touch on the screen (within the small black box) until a user-selected Portion P2, different from P1, would have been visible on the screen as shown in diagram (b). While viewing P2, and maintaining contact with the screen, the user could have pressed harder to move P2 from the Glimpse buffer memory into the system undo stack. Without breaking contact, the user could have lightened her touch to return to the glimpse preview mode, and continued translating the document until a third user-

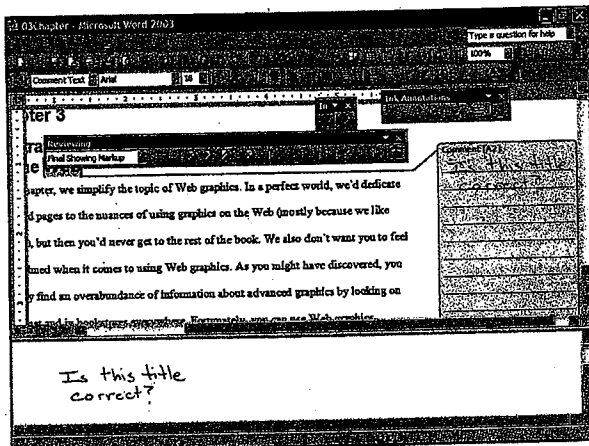
selected Portion P3 would have been viewed as shown in diagram (c). Upon then sensing a breaking of contact with the screen, the system would have restored the view to that stored in the system undo stack, which in this example is P2, as shown in diagram (d). The preferred way to accomplish this “undo” in Glimpse system is to animate the return graphically.

### (b) Inside Out

The Inside Out reference teaches that Microsoft Word 2003 can display a document in several different views and that print layout view is the “recommended” view for Tablet PCs running Microsoft Word 2003. (p. 764).

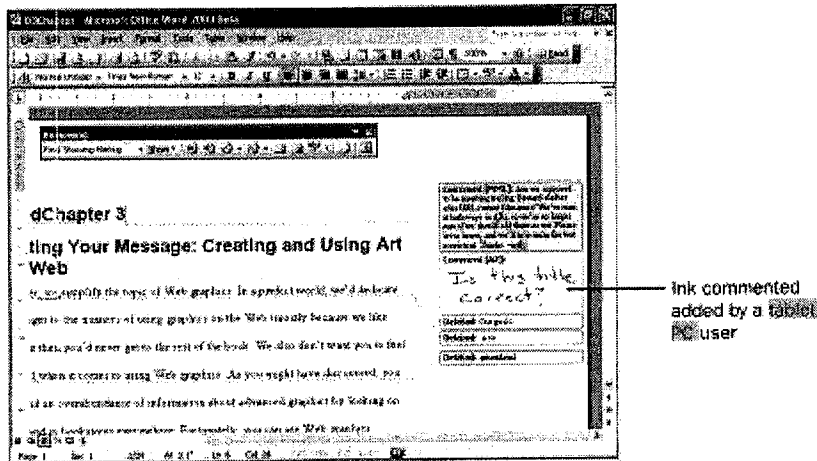
If you’re using a Tablet PC, you can add ink annotations directly on top of content in documents. For instance, you can circle text, draw arrows on graphics, highlight key topics, or cross out chart elements. You must be running Word 2003 on a Tablet PC to use ink annotations, and it is recommended that you work in Print Layout view for optimal results. (p. 764).

In Microsoft Word 2003’s print layout view, the edge of a document and a background area beyond the edge of the document are visible. The following screenshot published in Inside Out illustrates this type of view and again highlights the integration with a Tablet PC:



**Figure 27-10.** If you’re using Word 2003 on a Tablet PC, you can use your tablet pen to add ink comments. After you add ink comments, others can view your comments on other types of systems.

Inside Out, p. 762.



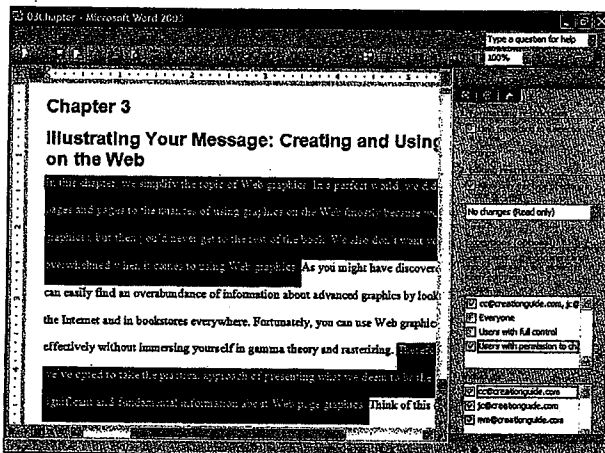
**Figure 27-13.** Ink comments appear alongside standard comments and tracked changes in a document's margin or Reviewing Pane. You can copy and delete ink comments, but you can't add text.

Inside Out, p. 764.

These screen shots show that in print layout view, when a background beyond the edge of a document is displayed after panning to the edge, there is less of the document on the screen (third portion) than there was before the user panned to the edge (first portion).

Inside Out also teaches that a user can zoom in on a region of the document such that the edge of the document and the area beyond the edge are not displayed on the screen initially:

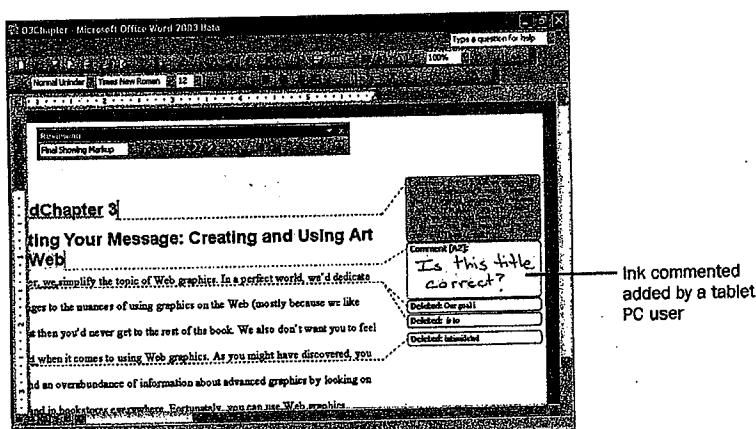
**Zooming in on information:** You can increase the viewing size of your document by using the Magnifier button (which displays the document at actual size) or by indicating a size in the Zoom box (either by selecting a size in the Zoom list or by typing a percentage value). To zoom in on a selected area, click the Magnifier button, and then click in the area of the document you want to examine more closely. You can use the Zoom box to further modify your view, if necessary. (p. 93).



**Figure 28-9.** You can control the amount of editing allowed in a document by selecting areas in the document that can be edited and then assigning which users can edit which content areas.

Inside Out, p. 803.

As can be seen in Fig. 28-9, the document extends beyond the edge of the screen in every direction. Thus, the entire display is filled with the document (first portion). The user then pans in any direction to reveal other regions of the document. If the user reaches the edge of the document, the background area beyond the edge becomes visible and a smaller portion of the document (third portion) is displayed on the screen:



**Figure 27-13.** Ink comments appear alongside standard comments and tracked changes in a document's margin or Reviewing Pane. You can copy and delete ink comments, but you can't add text.

Inside Out, p. 764.

### (c) The Robbins Application

The Robbins application No. 2005/0195154, published September 8, 2005, teaches panning and zooming on a portable device:

The present invention relates to a system and/or methodology that facilitate navigating and/or browsing large information spaces on relatively small portable devices such as portable phones, PDAs and the like, for example. In particular, the system and method allow navigation of multi-resolution graphical content at multiple levels of magnification. (¶ 4).

Robbins also teaches using a touch screen as the input for the portable device:

[T]he portable device can have a touch screen or some other type of display screen or touch pad that is sensitive to and/or receptive to a pointing device. (¶ 7; see also ¶100).

Robbins teaches “glancing” at other regions of the document and using animations to transition between regions:

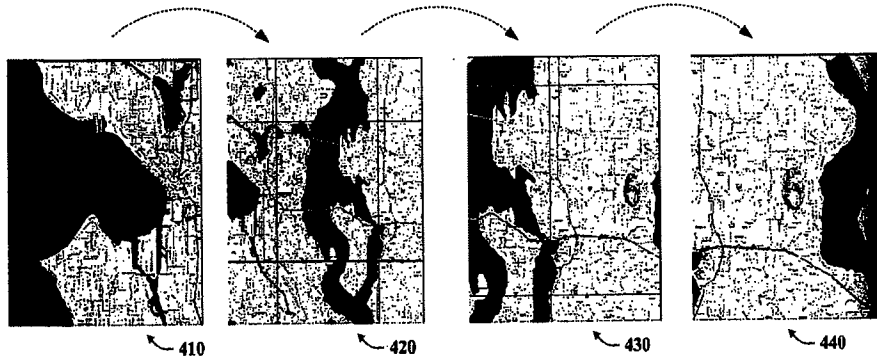
According to still another aspect of the invention, a user can “glance” at other parts of a data-set or document while browsing through such data-set on a portable device. For example, imagine that a user indicates an area of the data-set for detailed inspection. In general, this may happen via clicking on a region, selecting the name of a region from a menu or dialog, or pressing a hardware button or function key that is assigned ahead of time to a particular region. When the user wants to quickly glance at another region, the user can instruct the application to temporarily switch the view to another region by again selecting another region via the aforementioned techniques. After a time-delay or after the user releases a hardware or software button, the view quickly and smoothly (e.g., via animation) can snap back to the previous view. (¶ 9).

Robbins explains one possible animation for this “snap back,” teaching that when panning from one region to another, the screen will display the first region then zoom out while simultaneously panning toward the new region to be displayed. As the screen approaches the new region, the view zooms in to align the new area with the edges of the screen. This functionality is explained in the passage and figure below:

For example, in FIG. 4, a series of screen views of the map illustrate a *smooth and/or animated transition by panning from sector 4 to sector 6*, the sibling view of sector 4. In particular, screen view 410 shows a zoomed in view of sector or sub-sector 4. However, when panning from sub-sector 4 to sub-sector 6, the screen view zooms out (420) and then gradually zooms in (430) as sub-sector 6 is reached. When sub-sector 6 is in “full” view to the near exclusion of other sub-sectors (enlarged sub-sector 6 takes up the display space), the sub-sector 6 appears as enlarged or zoomed in according to screen view 440 (e.g., enlarged to a similar degree as the initial focus of interest: sub-sector 4). All of these view



transitions (e.g., in, out, and same-level translation) are animated smoothly by using a simplified version of a pan-and-zoom algorithm. (§ 75) (emphasis added).



VIEW ZOOMS OUT DURING PAN FROM ONE SIBLING VIEW (SECTOR 4) TO ANOTHER (SECTOR 6)

**FIG. 4**

Robbins teaches using this panning animation after a user stops glancing at a region to “snap back to the previous view.” (§ 9). This function can be provided by Robbins’ system while a user is moving dynamically around a grid of information. (§ 92).

Robbins further describes its spring-loaded glance and return function in §86:

To “glance” momentarily in another direction (at a nearby view) the user presses-and-holds down on the appropriate number key. When the key is released, the view animates back to the previous view. This spring-loaded glancing can be extended to also work with child views of the current view. If the user is currently zoomed out, such that segment cues are shown for the current view’s child segments, pressing and holding on the number key will temporarily zoom the view to the appropriate child view. Releasing that same key will then return to the parent view. This spring-loaded view shifting allows the user to quickly glance at other sections of the data-set without losing track of their preferred center of interest.

The animation provided in Robbins can include following a route. (§107).

Robbins also teaches that the amount of detail displayed during the panning transition depends on the speed of the pointing device that initiated the panning:

Turning now to FIGS. 16-24, a navigational sequence using a pointing device on a small portable device is shown, wherein each figure represents a phase in the sequence. Looking initially at FIG. 16, there is illustrated an image of a portable device 1600 displaying a

portion of a map 1610 on its screen. In general, as the speed of a pointing device increases, less detail (e.g., more of an overview) of the underlying content appears on the screen. However, at slower speeds, more detail of the underlying content is displayed. Transitions between views of the content are smooth and fluid-like rather than abrupt zoom-in and out changes. (¶ 112).

**(d) The Zimmerman Patent**

The Zimmerman patent discloses that the panning speed of an electronic document (a list is a disclosed example) corresponds to the speed of motion of a user’s finger on the touch screen while the user maintains contact with the screen, noting that in a natural manner, the initial speed of displacement of the displayed image corresponds to the speed of motion of the finger along the screen. When the user breaks contact, the list continues translating but the speed is then slowly decreased until it reaches zero, which one skilled in the art would understand to be a damped motion. (Exhibit E, Abstract; and col. 3, ln. 45 - col. 4, ln. 37). (The ‘854 patent specification refers at column 20, lines 37-46 to: “simulation of a physical device having friction, i.e., damped motion” . . .).

**2. Grounds for Rejection of the Claims**

(a) *First Ground for Rejection:* Claims 1-11, 13, 14, 16, 17, 19, and 20 would have been obvious over the Glimpse article in view of Inside Out.

By comparing the content of the Glimpse article and Inside Out to Claims 1-11, 13, 14, 16, 17, 19, and 20 of the ‘381 patent, it will become clear that to one of ordinary skill in the art the claimed subject matter would have been obvious.

<b>Claim</b>	<b>Prior Art</b>
<b>1[a]</b> A computer implemented method, comprising:	The Glimpse article discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract).
<b>1[b]</b> at a device with a touch screen display:	Glimpse discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract). Inside Out discloses a touch screen Tablet PC. (Fig. 27-10, p. 762).

<p><b>1[c]</b> displaying a first portion of an electronic document</p>	<p>Glimpse discloses allowing a user to pan to different portions of a document displayed on a multi-level touch screen, including the displaying of a first portion of an electronic document:</p> <p>Our technique would enable users to preview different magnification levels with light touch input before choosing to remain at the new level with a heavy touch or to return to a previous level by releasing. Similarly a user may click and drag using light input to <i>pan to other portions of the document</i>, easily able to return to their previous position. Taking a temporary glimpse at details that are too small to see clearly (in the case of zooming) or off-screen (in the case of panning) becomes a single touch operation. (p. 1377)(emphasis added).</p>
<p><b>1[d]</b> detecting a movement of an object on or near the touch screen display</p>	<p>Glimpse teaches detecting movement of an object on the touch screen display by using a pressure sensitive touch screen to identify multi-level input, including both light touch and heavy touch:</p> <p>The technique we propose provides a method for editing objects with a multi-level input device such as a pressure sensitive stylus, <i>pressure sensitive touch screen</i>, or pop-through mouse. We have used both a TabletPC and a touch sensitive DiamondTouch [3] surface as our pressure sensitive input device. (p. 1376)(emphasis added).</p> <p>Glimpse also teaches tracking movement of an object in contact with the pressure sensitive screen:</p> <p>Any multi-state input device that also <i>provides tracking</i> (explicitly, as in the case of the pop-through mouse's on-screen pointer, or implicitly, as in the case of a stylus or finger) can exploit this technique. (p. 1376) (emphasis added).</p> <p>Inside Out discloses stylus input to a touch screen Tablet PC. (Fig. 27-10, p. 762).</p>
<p><b>1[e]</b> in response to detecting the movement, translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion</p>	<p>Glimpse discloses panning to different portions of an electronic document using a progression of light touch to heavy touch and back again. Glimpse teaches that if a light touch is applied, a preview of a second portion of the document is displayed to the user. If the user then applies a heavy touch, the view on the screen when the heavy touch is applied becomes the new saved location. The user then returns to applying a light touch to continue previewing other portions of the document without ever breaking contact with the screen. (p. 1376-77).</p> <p>In addition, the 381 patent admits that the prior art teaches this</p>

	<p>limitation. The 381 patent teaches that only a portion of a large electronic document can be visible on the small screen of a portable electronic device at a given time. A user can pan electronic documents to display other portions on the screen:</p> <p style="padding-left: 40px;">As a result of the small size of display screens on portable electronic devices and the potentially large size of electronic files, frequently only a portion of a list or of an electronic document of interest to a user can be displayed on the screen at a given time. Users thus will frequently need to scroll displayed lists or to translate displayed electronic documents. (Col. 2, ln 14-21).</p>
<p><b>1[f]</b> in response to an edge of the electronic document being reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display: displaying an area beyond the edge of the document, and displaying a third portion of the electronic document, wherein the third portion is smaller than the first portion; and</p>	<p>Glimpse discloses a user panning to display various portions of an electronic document, including a second portion, while the object is still detected on the screen with at least a light touch. (p. 1376-77).</p> <p>To the extent displaying an area beyond the edge of a document is not explicitly or inherently disclosed by Glimpse, doing so would have been obvious to one skilled in the art in light of Glimpse, either alone, or in combination with Inside Out, which teaches continuing translation of an electronic document when an edge is reached until an area beyond the edge is displayed on a Tablet PC. (p. 764). One of ordinary skill in the art would have been motivated to combine Glimpse with Inside Out’s teaching of Microsoft Word 2003 functions because Glimpse is directed to navigating, exploring, and editing electronic documents on a Tablet PC. Glimpse teaches using a Tablet PC “as our pressure sensitive input device.” (p. 1377). The Inside Out reference explains that Tablet PCs can run Microsoft Word 2003. Furthermore, it would have been common sense at the time to use a Microsoft Word 2003 document on a Tablet PC, and therefore, in combination with Glimpse.</p>
<p><b>1[g]</b> in response to detecting that the object is no longer on or near the touch screen display, translating the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion</p>	<p>Glimpse teaches that when contact is broken with the screen, the screen automatically pans back to the saved state of the document, which is a fourth portion that is different than the first portion. Combination of Inside Out with Glimpse as described above further includes panning beyond an edge. It would have been obvious to return by panning the document in a second direction because Glimpse teaches “animating this undo graphically” to return to the previous view. (p. 1377). Clearly, continuing in the first direction is not an operable option for accomplishing the return. Thus, Glimpse translates in another direction until the area is no longer displayed, and then may or may not continue translating, depending on the location of the saved state of the document. In either case, the claim language reads on the Glimpse process.</p>

	<p>If a Glimpse user has applied a heavy touch while panning around the document, the saved system undo stack (default state) is the location where the user applied the heavy touch (second portion), not the location where the user began panning with a light touch (first portion). Therefore, the restored view (fourth portion) is the same as the second portion and different from the first portion. (p. 1376-77). The view of the second portion occupies the viewing area of the screen and obscures the previously displayed area beyond the edge.</p>
<p>2. The computer-implemented method of claim 1, wherein the first portion of the electronic document, the second portion of the electronic document, the third portion of the electronic document, and the fourth portion of the electronic document are displayed at the same magnification.</p>	<p>Glimpse teaches panning and zooming techniques for navigating an electronic document. Glimpse teaches using these features separately, allowing a user to pan to different areas of a document while maintaining the same magnification. (p. 1377)</p>
<p>3. The computer-implemented method of claim 1, wherein the movement of the object is on the touch screen display.</p>	<p>Glimpse teaches tracking touch input on a pressure sensitive screen to provide previewing by changing the portion of the document viewed on the touch screen. (p. 1376-77)</p>
<p>4. The computer-implemented method of claim 1, wherein the object is a finger.</p>	<p>Glimpse discloses a pressure sensitive screen that can sense a user's finger:  Any multi-state input device that also provides tracking (explicitly, as in the case of the pop-through mouse's on-screen pointer, or implicitly, as in the case of a stylus <i>or finger</i>) can exploit this technique. (p. 1376) (emphasis added).</p>
<p>5. The computer-implemented method of claim 1, wherein the first direction is a vertical direction, a horizontal direction, or a diagonal direction.</p>	<p>Glimpse discloses panning to different portions of an electronic document without any restriction as to the direction of the panning:</p> <p>We describe a technique that supports the previewing of navigation, exploration, and editing operations by providing convenient Undo for unsuccessful and/or undesirable actions on multi-level input devices such as touch screens and pen-based computers. (Abstract).</p> <p>[A] user may click and drag using light input to pan to other portions of the document, easily able to return to their previous position. Taking a temporary glimpse at details that are too small to see clearly (in the case of zooming) or off-screen (in the case of panning) becomes a single touch operation. (p. 1377).</p> <p>To the extent vertical, horizontal, or diagonal tracking are not explicitly disclosed in Glimpse, they would have been obvious to</p>

	one skilled in the art as a matter of common sense and as a finite set of options to try, each having a predictable result.
6. The computer-implemented method of claim 1, wherein the electronic document is a web page.	It would have been obvious to a skilled person to provide the functionality of Glimpse in view of Inside Out in the case of viewing a web page, as a matter of general knowledge and common practice.
7. The computer-implemented method of claim 1, wherein the electronic document is a digital image.	The electronic documents described and/or shown in the Glimpse article and Inside Out are digital images, as would have been appreciated by a skilled person.
8. The computer-implemented method of claim 1, wherein the electronic document is a word processing, spreadsheet, email or presentation document.	The Glimpse article provides a “system wide” method for systems such as Microsoft Windows OS and describes how the authors method would have been applied in the preparation of the article, obviously using a word processing program generating a word processing digital document. (p. 1375-78) Inside Out shows and describes use of the print layout view on a Tablet PC for editing a Microsoft Word digital document. (p. 764)
9. The computer-implemented method of claim 1, wherein the electronic document includes a list of items.	Glimpse discloses that it was well known in the art to navigate lists of items:  Ramos, et al. [4] described a continuous pressure-sensing stylus to manipulate multi-state objects. They mapped continuous pressure to visual properties of the pointer, e.g., moving the pointer down a <i>list of menu selections</i> as pressure increases, or to change the appearance of objects, e.g., making objects larger and smaller based on pressure. (p. 1376) (emphasis added).
10. The computer-implemented method of claim 1, wherein the second direction is opposite the first direction.	As described above, Glimpse animates the undo operation graphically in returning to a previously viewed portion. (p. 1377). To do so involves a selection from a finite set of possible animation techniques. It would have been obvious to select return panning in the opposite direction from this finite set.
11. The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching an edge of the document has an associated speed of translation that corresponds to a speed of movement of the object	The Glimpse article refers to “any multi-state input device that also provides tracking . . . as in the case of a stylus of finger . . .” (p. 1376). A skilled person would read this to mean translating a document at the same speed as a finger or stylus. It would have been obvious to use tracking in the Glimpse system as modified according to Inside Out.
13. The computer-implemented method of claim 1, wherein the area beyond the edge of the document is black, gray, a solid color, or white.	Inside Out, Fig. 27-13, shows a gray area beyond the edge of a displayed digital document on a touch screen. It would have been obvious to utilize this in modifying the Glimpse article according to Inside Out. To select another color also would have been obvious.
14. The computer-implemented method of claim 1, wherein the area beyond the	Inside Out, Fig. 27-13, shows a visually distinct area beyond the edge of a displayed digital document on a touch screen. It would

<p>edge of the document is visually distinct from the document.</p>	<p>have been obvious to utilize this in modifying the Glimpse article according to Inside Out.</p>
<p><b>16.</b> The computer-implemented method of claim 1, wherein changing from translating in the first direction to translating in the second direction until the area beyond the edge of the document is no longer displayed makes the edge of the electronic document appear to be elastically attached to an edge of the touch screen display or to an edge displayed on the touch screen display.</p>	<p>As shown graphically below, Glimpse allows a user to save to the system undo stack a view in which the edge of the document is even with the edge of the screen of a touch screen device. Then, when the user further translates in a preview mode to expose an area beyond the edge as would have been obvious in view of Inside Out, and then releases contact with the screen, the view “snaps” back to that stored in the undo stack, making the edge of the document appear to be elastically attached to the edge of the screen display.</p>
<p><b>17 [a]</b> The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching the edge of the electronic document has a first associated translating distance that corresponds to a distance of movement of the object prior to reaching the edge of the electronic document;</p>	<p>The Glimpse article references tracking of the stylus or finger object on a touch screen (p. 1376-77) and the translation distance prior to reaching an edge clearly can be large in comparison to dimensions of the screen.</p>
<p><b>17[b]</b> and wherein displaying an area beyond the edge of the electronic document comprises translating the electronic document in the first direction for a second associated translating distance, wherein the second associated translating distance is less than a distance of movement of the object after reaching the edge of the electronic document.</p>	<p>Inside Out shows a small dimension of area beyond the edges, obviously often less than the distance the document has been translated before reaching the edge. (Fig. 27-13, p. 764). It would have been obvious to modify Glimpse by exposing a relatively small area beyond the edges as shown in Inside Out, where the movement required to expose that area is less than the distance the document was translated before reaching the edge.</p>
<p><b>19[a]</b> A device, comprising:</p>	<p>Glimpse discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract).</p>
<p><b>19[b]</b> a touch screen display;</p>	<p>Glimpse discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract). Inside Out discloses a touch screen Tablet PC. (Fig. 27-10, p. 762)</p>
<p><b>19[c]</b> one or more processors; memory; and one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the programs including:</p>	<p>Glimpse discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract). Glimpse also discloses using a “Tablet PC...as our pressure sensitive input device.” (p.1376) Inside Out discloses a Tablet PC. One skilled in the art would have known that these devices contain a processor, memory, and programs stored in the memory and configured to be executed by the processor.</p>

<p><b>19[d]</b> instructions for displaying a first portion of an electronic document;</p>	<p>Glimpse discloses allowing a user to pan to different portions of a document displayed on a multi-level touch screen, including the displaying of a first portion of an electronic document:</p> <p>Our technique would enable users to preview different magnification levels with light touch input before choosing to remain at the new level with a heavy touch or to return to a previous level by releasing. Similarly a user may click and drag using light input to <i>pan to other portions of the document</i>, easily able to return to their previous position. Taking a temporary glimpse at details that are too small to see clearly (in the case of zooming) or off-screen (in the case of panning) becomes a single touch operation. (p. 1377)(emphasis added).</p>
<p><b>19[e]</b> instructions for detecting a movement of an object on or near the touch screen display;</p>	<p>Glimpse teaches detecting movement of an object on the touch screen display by viewing a pressure sensitive touch screen to identify multi-level input, including both light touch and heavy touch:</p> <p>The technique we propose provides a method for editing objects with a multi-level input device such as a pressure sensitive stylus, <i>pressure sensitive touch screen</i>, or pop-through mouse. We have used both a TabletPC and a touch sensitive DiamondTouch [3] surface as our pressure sensitive input device. (p. 1376)(emphasis added).</p> <p>Glimpse also teaches tracking movement of an object in contact with the pressure sensitive screen:</p> <p>Any multi-state input device that also <i>provides tracking</i> (explicitly, as in the case of the pop-through mouse's on-screen pointer, or implicitly, as in the case of a stylus or finger) can exploit this technique. (p. 1376) (emphasis added).</p> <p>Inside Out discloses stylus input to a touch screen Tablet PC. (Fig. 27-10, p. 762)</p>
<p><b>19[f]</b> instructions for translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion, in response to detecting the movement;</p>	<p>Glimpse discloses panning to different portions of an electronic document using a progression of light touch to heavy touch and back again. Glimpse teaches that if a light touch is applied, a preview of a second portion of the document is displayed to the user. If the user then applies a heavy touch, the view on the screen when the heavy touch is applied becomes the new saved location. The user then returns to applying a light touch to continue previewing other portions of the document without ever breaking contact with the screen. (p. 1376-77)</p>



	<p>In addition, the 381 patent admits that the prior art teaches this limitation. The 381 patent teaches that only a portion of a large electronic document can be visible on the small screen of a portable electronic device at a given time. A user can pan electronic documents to display other portions on the screen:</p> <p style="padding-left: 40px;">As a result of the small size of display screens on portable electronic devices and the potentially large size of electronic files, frequently only a portion of a list or of an electronic document of interest to a user can be displayed on the screen at a given time. Users thus will frequently need to scroll displayed lists or to translate displayed electronic documents. (Col. 2, ln 14-21).</p>
<p><b>19[g]</b> instructions for displaying an area beyond an edge of the electronic document and displaying a third portion of the electronic document, wherein the third portion is smaller than the first portion, in response to the edge of the electronic document being reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display; and</p>	<p>Glimpse discloses a user panning to display various portions of an electronic document, including a second portion, while the object is still detected on the screen with at least a light touch. (p. 1376-77).</p> <p>To the extent displaying an area beyond the edge of a document is not explicitly or inherently disclosed by Glimpse, doing so would have been obvious to one skilled in the art in light of Glimpse, either alone, or in combination with Inside Out, which teaches continuing translation of an electronic document when an edge is reached until an area beyond the edge is displayed on a Tablet PC. (p. 764). One of ordinary skill in the art would have been motivated to combine Glimpse with Inside Out's teaching of Microsoft Word 2003 functions because Glimpse is directed to navigating, exploring, and editing electronic documents on a Tablet PC. Glimpse teaches using a Tablet PC "as our pressure sensitive input device." (p. 1377). The Inside Out reference explains that Tablet PCs can run Microsoft Word 2003. Furthermore, it would have been common sense at the time to use a Microsoft Word 2003 document on a Tablet PC, and therefore, in combination with Glimpse.</p>
<p><b>19[h]</b> instructions for translating the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion, in response to detecting that the object is no longer on or near the touch screen display.</p>	<p>Glimpse teaches that when contact is broken with the screen, the screen automatically pans back to the saved state of the document, which is a fourth portion that is different than the first portion. Combination of Inside Out with Glimpse as described above further includes panning beyond an edge. It would have been obvious to return by panning the document in a second direction because Glimpse teaches "animating this undo graphically" to return to the previous view. (p. 1377). Continuing in the first direction is not an operable option for accomplishing the return.</p> <p>If a Glimpse user has applied a heavy touch while panning around the document, the saved system undo stack (default state) is the</p>

	<p>location where the user applied the heavy touch (second portion), not the location where the user began panning with a light touch (first portion). Therefore, the restored view (fourth portion) is the same as the second portion and different from the first portion. (p. 1376-77). The view of the second portion prior reaching an edge obscures the previously displayed area beyond the edge.</p>
<p><b>20[a]</b> A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:</p>	<p>Glimpse discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract).  Inside Out discloses a touch screen Tablet PC. (Fig. 27-10, p. 762)</p>
<p><b>20[b]</b> display a first portion of an electronic document;</p>	<p>Glimpse discloses allowing a user to pan to different portions of a document displayed on a multi-level touch screen, including the displaying of a first portion of an electronic document:</p> <p style="padding-left: 40px;">Our technique would enable users to preview different magnification levels with light touch input before choosing to remain at the new level with a heavy touch or to return to a previous level by releasing. Similarly a user may click and drag using light input to <i>pan to other portions of the document</i>, easily able to return to their previous position. Taking a temporary glimpse at details that are too small to see clearly (in the case of zooming) or off-screen (in the case of panning) becomes a single touch operation. (p. 1377)(emphasis added).</p>
<p><b>20[c]</b> detect a movement of an object on or near the touch screen display;</p>	<p>Glimpse teaches detecting movement of an object on the touch screen display by using a pressure sensitive touch screen to identify multi-level input, including both light touch and heavy touch:</p> <p style="padding-left: 40px;">The technique we propose provides a method for editing objects with a multi-level input device such as a pressure sensitive stylus, <i>pressure sensitive touch screen</i>, or pop-through mouse. We have used both a TabletPC and a touch sensitive DiamondTouch [3] surface as our pressure sensitive input device. (p. 1376)(emphasis added).</p> <p>Glimpse also teaches tracking movement of an object in contact with the pressure sensitive screen:</p> <p style="padding-left: 40px;">Any multi-state input device that also <i>provides tracking</i> (explicitly, as in the case of the popthrough mouse’s on-screen pointer, or implicitly, as in the case of a stylus or finger) can exploit this technique. (p. 1376) (emphasis added).</p>

	<p>Inside Out discloses stylus input to a touch screen Tablet PC. (Fig. 27-10, p. 762)</p>
<p><b>20[d]</b> translate the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion, in response to detecting the movement</p>	<p>Glimpse discloses panning to different portions of an electronic document using a progression of light touch to heavy touch and back again. Glimpse teaches that if a light touch is applied, a preview of a second portion of the document is displayed to the user. If the user then applies a heavy touch, the view on the screen when the heavy touch is applied becomes the new saved location. The user then returns to applying a light touch to continue previewing other portions of the document without ever breaking contact with the screen. (p. 1376-77)</p> <p>In addition, the 381 patent admits that the prior art teaches this limitation. The 381 patent teaches that only a portion of a large electronic document can be visible on the small screen of a portable electronic device at a given time. A user can pan electronic documents to display other portions on the screen:</p> <p style="padding-left: 40px;">As a result of the small size of display screens on portable electronic devices and the potentially large size of electronic files, frequently only a portion of a list or of an electronic document of interest to a user can be displayed on the screen at a given time. Users thus will frequently need to scroll displayed lists or to translate displayed electronic documents. (Col. 2, ln 14-21).</p>
<p><b>20[e]</b> display an area beyond an edge of the electronic document and display a third portion of the electronic document, wherein the third portion is smaller than the first portion, if the edge of the electronic document is reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display; and</p>	<p>Glimpse discloses a user panning to display various portions of an electronic document, including a second portion, while the object is still detected on the screen with at least a light touch. (p. 1376-77).</p> <p>To the extent displaying an area beyond the edge of a document is not explicitly or inherently disclosed by Glimpse, doing so would have been obvious to one skilled in the art in light of Glimpse, either alone, or in combination with Inside Out, which teaches continuing translation of an electronic document when an edge is reached until an area beyond the edge is displayed on a Tablet PC. (p. 764). One of ordinary skill in the art would have been motivated to combine Glimpse with Inside Out's teaching of Microsoft Word 2003 functions because Glimpse is directed to navigating, exploring, and editing electronic documents on a Tablet PC. Glimpse teaches using a Tablet PC "as our pressure sensitive input device." (p. 1377). The Inside Out reference explains that Tablet PCs can run Microsoft Word 2003. Furthermore, it would have been common sense at the time to use a Microsoft Word 2003 document on a Tablet PC, and therefore, in combination with Glimpse.</p>

<p><b>20[f]</b> translate the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion, in response to detecting that the object is no longer on or near the touch screen display.</p>	<p>Glimpse teaches that when contact is broken with the screen, the screen automatically pans back to the saved state of the document, which is a fourth portion that is different than the first portion. Combination of Inside Out with Glimpse as described above further includes panning beyond an edge. It would have been obvious to return by panning the document in a second direction because Glimpse teaches “animating this undo graphically” to return to the previous view. (p. 1377). Continuing in the first direction is not an operable option for accomplishing the return.</p> <p>If a Glimpse user has applied a heavy touch while panning around the document, the saved system undo stack (default state) is the location where the user applied the heavy touch (second portion), not the location where the user began panning with a light touch (first portion). Therefore, the restored view (fourth portion) is the same as the second portion and different from the first portion. (p. 1376-77). The view of the second portion prior reaching an edge obscures the previously displayed area beyond the edge.</p>
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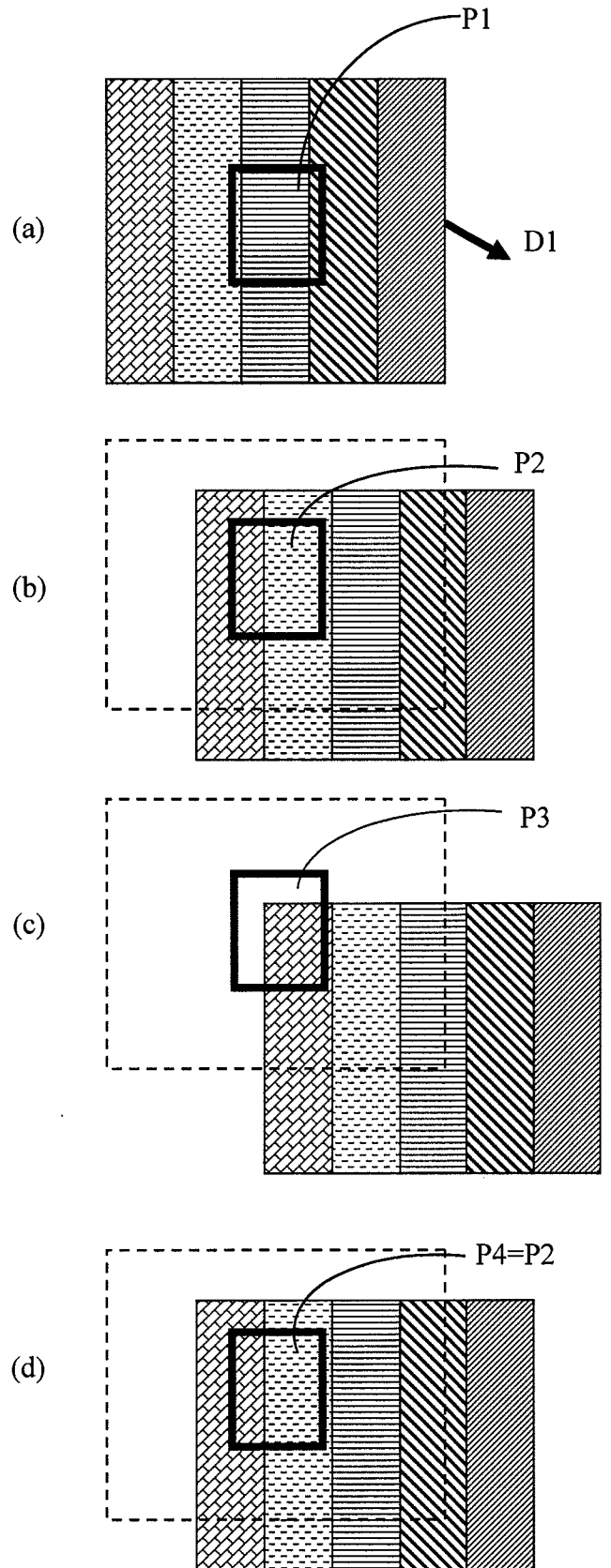
The Glimpse article discloses all of the elements of Claim 1 of the '381 patent implemented on a touch screen device except displaying an area beyond an edge of the document in response to reaching the edge. As Glimpse teaches an animated return to a previously viewed portion of a document different from the initially viewed portion, it would have been obvious for the return animation to be translating back to the previously viewed portion, which necessarily would involve movement in a different direction. Inside Out discloses displaying an area beyond an edge of the document in response to reaching the edge, on a touch screen device. One skilled in the art would have found a clear motivation to modify the Glimpse article with the teachings of Inside Out, as they both disclose using a Tablet PC as a touch screen input device for their navigating and display techniques. The result of applying the described teaching from Inside Out to the Glimpse article method was predictable, namely, on translating and reaching an edge, an area beyond the edge would be displayed until the user or the system translated the document to display a portion away from the edge. Therefore, it would have been obvious to combine these two references to obtain the invention claimed in Claim 1.

The following diagrams and caption further explain how Claim 1 reads on the Glimpse article as modified in accordance with Inside Out.

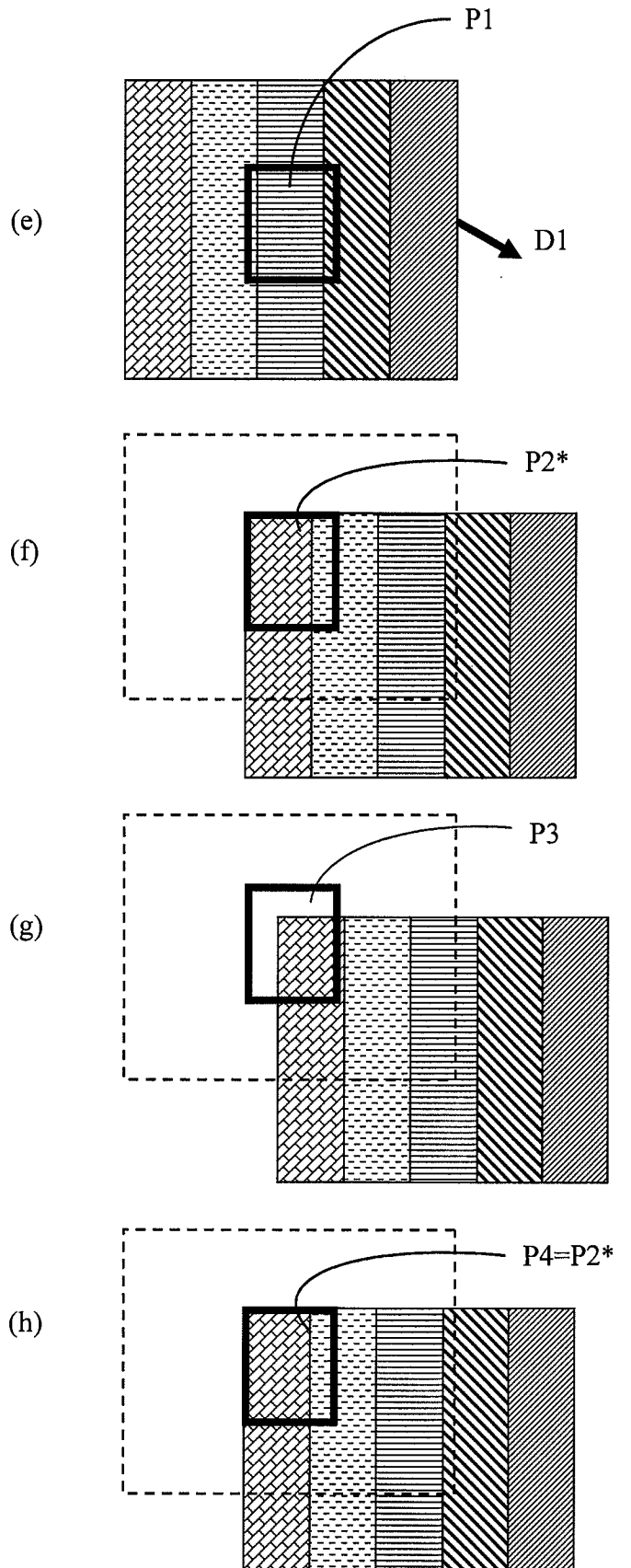
**DIAGRAM:  
GLIMPSE+INSIDE OUT**

Referring to a combination of the Glimpse article and Inside Out references, the modified Glimpse system and method provide a mode of operation as shown in the sequence of diagrams to the right. In the diagrams, the small black rectangle represents the screen of a touch screen device, held stationary by the user. The diagrams show the striped document in its entirety, although only a portion is visible on the screen. When the user drags her finger across the screen, the document “sticks” to the finger and moves in the same direction. The dashed box marks the initial position of the document.

When initially viewing a Portion P1 of an object such as a document as shown in diagram (a), the user could translate the document by moving a finger with a light touch on the screen until a Portion P2 would have been visible on the screen as shown in diagram (b). P2 is different from P1. While viewing P2, and maintaining contact with the screen, the user could have pressed harder to move P2 from the Glimpse buffer memory into the system undo stack. Without breaking contact, the user could have lightened her touch to return to the glimpse preview mode, and continued translating the document until an edge would have been exposed plus an area beyond the edge in accordance with the teaching of Inside Out, as shown in diagram (c), where the portion of the document being viewed, P3, is smaller than P1. Upon then sensing a breaking of contact with the screen, the system would have restored the view stored in the system undo stack, that is P2. The “fourth portion” of claim 1 reads on this final view P4, the same as P2, which is different from P1. The claim does not require that the fourth portion be different from the second portion.



The Glimpse article also supports a mode of operation in which the user can browse in the document to a position in which the portion viewed is aligned with one or more edges of the screen, as shown in diagram (f). Then the user can press harder to store this view P2\* in the system undo stack. Then, following further browsing to a position as shown in diagram (g) to view Portion P3, upon the user releasing contact, the system will animate a return to view P2\*, a movement just sufficient to no longer expose the area beyond the edge of the document. This corresponds to a fourth portion P4 different from P1.



As demonstrated in the chart above, independent claims 19 and 20 are device and computer readable medium versions of claim 1, and both read on the combination of the Glimpse article and Inside Out according the same analysis applied above in connection with claim 1. Dependent claims 2-11, 13, 14, 16, and 17 would have been obvious for the reasons stated in the above claims chart for this first ground of rejection.

(b) **Second Ground for Rejection:** Claims 1-11, 13-16, 17, 19, and 20 would have been obvious over the Glimpse article in view of Inside Out and the Robbins application.

By comparing the content of the Glimpse article, Inside Out, and the Robbins application to claims 1-11, 13-16, 17, 19, and 20 of the '381 patent, it will become clear that the claimed subject matter would have been obvious to one of ordinary skill in the art.

Claim	Prior Art
1[a] A computer implemented method, comprising:	The Glimpse article discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract).
1[b] at a device with a touch screen display:	Glimpse discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract). Inside Out discloses a touch screen Tablet PC. (Fig. 27-10, p. 762)
1[c] displaying a first portion of an electronic document	Glimpse discloses allowing a user to pan to different portions of a document displayed on a multi-level touch screen, including the displaying of a first portion of an electronic document:  Our technique would enable users to preview different magnification levels with light touch input before choosing to remain at the new level with a heavy touch or to return to a previous level by releasing. Similarly a user may click and drag using light input to <i>pan to other portions of the document</i> , easily able to return to their previous position. Taking a temporary glimpse at details that are too small to



Claim	Prior Art
	<p>see clearly (in the case of zooming) or off-screen (in the case of panning) becomes a single touch operation. (p. 1377)(emphasis added).</p>
<p><b>1[d]</b> detecting a movement of an object on or near the touch screen display</p>	<p>Glimpse teaches detecting movement of an object on the touch screen display by using a pressure sensitive touch screen to identify multi-level input, including both light touch and heavy touch:</p> <p>The technique we propose provides a method for editing objects with a multi-level input device such as a pressure sensitive stylus, <i>pressure sensitive touch screen</i>, or popthrough mouse. We have used both a TabletPC and a touch sensitive DiamondTouch [3] surface as our pressure sensitive input device. (p. 1376)(emphasis added).</p> <p>Glimpse also teaches tracking movement of an object in contact with the pressure sensitive screen:</p> <p>Any multi-state input device that also <i>provides tracking</i> (explicitly, as in the case of the popthrough mouse's on-screen pointer, or implicitly, as in the case of a stylus or finger) can exploit this technique. (p. 1376) (emphasis added).</p> <p>Inside Out discloses stylus input to a touch screen Tablet PC. (Fig. 27-10, p. 762)</p>
<p><b>1[e]</b> in response to detecting the movement, translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion</p>	<p>Glimpse discloses panning to different portions of an electronic document using a progression of light touch to heavy touch and back again. Glimpse teaches that if a light touch is applied, a preview of a second portion of the document is displayed to the user. If the user then applies a heavy touch, the view on the screen when the heavy touch is applied becomes the new saved location. The user then returns to applying a light touch to continue previewing other portions of the document without ever breaking contact with the screen. (p. 1376-77)</p> <p>In addition, the 381 patent admits that the prior art teaches this limitation. The 381 patent teaches that only a portion of a large electronic document can be visible on the small screen of a portable electronic device at a given time. A user can pan electronic documents to display other portions on the screen:</p> <p>As a result of the small size of display screens on portable electronic devices and the potentially large size of electronic files, frequently only a portion of a list or of an electronic document of interest to a user can be displayed on the screen</p>

Claim	Prior Art
	<p>at a given time. Users thus will frequently need to scroll displayed lists or to translate displayed electronic documents. (Col. 2, ln 14-21).</p>
<p><b>1[f]</b> in response to an edge of the electronic document being reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display: displaying an area beyond the edge of the document, and displaying a third portion of the electronic document, wherein the third portion is smaller than the first portion; and</p>	<p>Glimpse discloses a user panning to display various portions of an electronic document, including a second portion, while the object is still detected on the screen with at least a light touch. (p. 1376-77).</p> <p>To the extent displaying an area beyond the edge of a document is not explicitly or inherently disclosed by Glimpse, doing so would have been obvious to one skilled in the art in light of Glimpse, either alone, or in combination with Inside Out, which teaches continuing translation of an electronic document when an edge is reached until an area beyond the edge is displayed on a Tablet PC. (p. 764). One of ordinary skill in the art would have been motivated to combine Glimpse with Inside Out's teaching of Microsoft Word 2003 functions because Glimpse is directed to navigating, exploring, and editing electronic documents on a Tablet PC. Glimpse teaches using a Tablet PC "as our pressure sensitive input device." (p. 1377). The Inside Out reference explains that Tablet PCs can run Microsoft Word 2003. Furthermore, it would have been common sense at the time to use a Microsoft Word 2003 document on a Tablet PC, and therefore, in combination with Glimpse.</p>
<p><b>1[g]</b> in response to detecting that the object is no longer on or near the touch screen display, translating the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion</p>	<p>Glimpse teaches that when contact is broken with the screen, the screen automatically pans back to the saved state of the document, which is a fourth portion that is different than the first portion. Combination of Inside Out with Glimpse as described above further includes panning beyond an edge. It would have been obvious to return by panning the document in a second direction because Glimpse teaches "animating this undo graphically" to return to the previous view. (p. 1377). Continuing in the first direction is not an operable option for accomplishing the return.</p> <p>If a Glimpse user has applied a heavy touch while panning around the document, the saved system undo stack (default state) is the location where the user applied the heavy touch (second portion), not the location where the user began panning with a light touch (first portion). Therefore, the restored view (fourth portion) is the same as the second portion and different from the first portion. (p. 1376-77). The view of the second portion prior reaching an edge obscures the previously displayed area beyond the edge.</p> <p>In addition, to the extent (assuming for the sake of argument) panning (translating) in a second direction is not explicitly or</p>

Claim	Prior Art
	<p>inherently disclosed by Glimpse, such action would have been an obvious modification of Glimpse, as modified by Inside Out, in light of the Robbins reference. One of ordinary skill in the art would have been motivated to combine Glimpse with Robbins because both solutions are directed to the problem of navigating electronic documents by panning and zooming. Robbins teaches allowing a user to “glance” at other parts of a document with the option to easily revert back to the previous location. (¶ 9). Glimpse teaches animating a transition from the preview state to the saved state. (p. 1377). Robbins also teaches animating a transition between views while the user is panning. (¶ 75, 86). In fact, Robbins teaches using a spring-loaded panning animation after a user stops glancing at a region to “snap back to the previous view.” (¶ 9, 71, 75, 86).</p> <p>Because Glimpse calls for animating a transition, it would have been common sense to choose a simple animation that unwinds the panning and pans back from the preview state to the saved state, as more fully disclosed in Robbins. Thus, it would have been obvious to one of ordinary skill in the art to utilize the animations of the Robbins application in implementing the Glimpse technique for undo animation, as modified by Inside Out.</p>
<p>2. The computer-implemented method of claim 1, wherein the first portion of the electronic document, the second portion of the electronic document, the third portion of the electronic document, and the fourth portion of the electronic document are displayed at the same magnification.</p>	<p>Glimpse teaches panning and zooming techniques for navigating an electronic document. Glimpse teaches using these features separately, allowing a user to pan to different areas of a document while maintaining the same magnification. (p. 1377)</p>
<p>3. The computer-implemented method of claim 1, wherein the movement of the object is on the touch screen display.</p>	<p>Glimpse teaches tracking touch input on a pressure sensitive screen to provide previewing by changing the portion of the document viewed on the touch screen. (p. 1376-77)</p>
<p>4. The computer-implemented method of claim 1, wherein the object is a finger.</p>	<p>Glimpse discloses a pressure sensitive screen that can sense a user’s finger:</p> <p>Any multi-state input device that also provides tracking (explicitly, as in the case of the pop-through mouse’s on-screen pointer, or implicitly, as in the case of a stylus <i>or finger</i>) can exploit this technique. (p. 1376) (emphasis added).</p>
<p>5. The computer-implemented method of claim 1, wherein the first direction is</p>	<p>Glimpse discloses a pressure sensitive screen that can sense a user’s finger:</p>

Claim	Prior Art
<p>a vertical direction, a horizontal direction, or a diagonal direction.</p>	<p>Any multi-state input device that also provides tracking (explicitly, as in the case of the pop-through mouse's on-screen pointer, or implicitly, as in the case of a stylus <i>or finger</i>) can exploit this technique. (p. 1376) (emphasis added).</p>
<p>6. The computer-implemented method of claim 1, wherein the electronic document is a web page.</p>	<p>The Robbins application teaches navigating a dataset by panning and zooming. The dataset can include a webpage:</p> <p>Referring now to FIG. 2, there is illustrated a block diagram of another advanced navigation system 200 that facilitates the navigation of two-dimensional content space in portable devices. Before navigation (or browsing) can begin, content such as a data-set can be uploaded or accessed by the portable device. The content can include, but is not limited to, any type of document, such as pictures, calendars, images, spreadsheets, reports, maps, books, text, <i>web pages</i>, etc. as well as their related programs or applications. (§ 67) (emphasis added).</p> <p>It would have been obvious to utilize the combined teachings as described above for web pages, in view of Robbins.</p>
<p>7. The computer-implemented method of claim 1, wherein the electronic document is a digital image.</p>	<p>Robbins teaches navigating a dataset by panning and zooming. The dataset can include an image:</p> <p>Referring now to FIG. 2, there is illustrated a block diagram of another advanced navigation system 200 that facilitates the navigation of two-dimensional content space in portable devices. Before navigation (or browsing) can begin, content such as a data-set can be uploaded or accessed by the portable device. The content can include, but is not limited to, any type of document, such as pictures, calendars, <i>images</i>, spreadsheets, reports, maps, books, text, web pages, etc. as well as their related programs or applications. (§ 67) (emphasis added).</p> <p>It would have been obvious to utilize the combined teachings as described above for digital images, in view of Robbins.</p>
<p>8. The computer-implemented method of claim 1, wherein the electronic document is a word processing, spreadsheet, email or presentation document.</p>	<p>Robbins also teaches navigating a dataset by panning and zooming. The dataset can include a document or spreadsheet:</p> <p>Referring now to FIG. 2, there is illustrated a block diagram of another advanced navigation system 200 that facilitates the navigation of two-dimensional content space in portable devices. Before navigation (or browsing) can begin, content such as a data-set can be uploaded or accessed by the portable device. The content can include, but is not limited</p>

Claim	Prior Art
	<p>to, any type of document, such as pictures, calendars, images, <i>spreadsheets</i>, reports, maps, books, text, web pages, etc. as well as their related programs or applications. (¶ 67) (emphasis added).</p> <p>It would have been obvious to utilize the combined teachings as described above for spreadsheets, in view of Robbins.</p>
<p>9. The computer-implemented method of claim 1, wherein the electronic document includes a list of items.</p>	<p>Glimpse discloses that it was well known in the art to navigate lists of items:</p> <p>Ramos, et al. [4] described a continuous pressure-sensing stylus to manipulate multi-state objects. They mapped continuous pressure to visual properties of the pointer, e.g., moving the pointer down a <i>list of menu selections</i> as pressure increases, or to change the appearance of objects, e.g., making objects larger and smaller based on pressure. While this work provides a good exploration of the design space for pressure sensitive widgets, no recommendations are made for implementing pressure sensitivity in a systemwide manner. (p. 1376) (emphasis added).</p>
<p>10. The computer-implemented method of claim 1, wherein the second direction is opposite the first direction.</p>	<p>Robbins also discloses a “spring-loaded” panning from one location to another in an electronic document and then snapping back to the first location using a smooth animation. If the user has directly panned from one location to another, the snapping back movement will simply reverse direction and the second direction will be the opposite of the first.</p> <p>Robbins discloses an example “snap back animation,” teaching that when panning from one region to another, the screen will display the first region then zoom out while simultaneously panning toward the new region. As the screen approaches the new region, the view zooms in to align the new area with the edges of the screen. (¶ 75).</p>
<p>11. The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching an edge of the document has an associated speed of translation that corresponds to a speed of movement of the object.</p>	<p>Robbins also teaches that the amount of detail displayed during the panning transition depends on the speed of the pointing device that initiated the panning:</p> <p>Turning now to FIGS. 16-24, a navigational sequence using a pointing device on a small portable device is shown, wherein each figure represents a phase in the sequence. Looking initially at FIG. 16, there is illustrated an image of a portable device 1600 displaying a portion of a map 1610 on its screen. In general, as the speed of a pointing device increases, less detail (e.g., more of an overview) of the underlying content appears on the screen. However, at slower speeds, more detail of the underlying content is</p>

Claim	Prior Art
	<p>displayed. Transitions between views of the content are smooth and fluid-like rather than abrupt zoom-in and out changes. (¶ 112).</p> <p>It would have been obvious to modify the combined teachings as described to provide translation speed corresponding to movement of the pointing object, in view of Robbins.</p>
<p>13. The computer-implemented method of claim 1, wherein the area beyond the edge of the document is black, gray, a solid color, or white.</p>	<p>Inside Out, Fig. 27-13, shows a gray area beyond the edge of a displayed digital document on a touch screen. It would have been obvious to utilize this in modifying the Glimpse article according to Inside Out. (p. 764). To select another color also would have been obvious.</p>
<p>14. The computer-implemented method of claim 1, wherein the area beyond the edge of the document is visually distinct from the document.</p>	<p>Inside Out, Fig. 27-13, shows a visually distinct area beyond the edge of a displayed digital document on a touch screen. It would have been obvious to utilize this in modifying the Glimpse article according to Inside Out. (p. 764).</p>
<p>15. The computer-implemented method of claim 1, wherein translating the document in the second direction is a damped motion.</p>	<p>Robbins also discloses animating smoothly when transitioning between viewed portions of an electronic document (¶ 75). It would have been obvious to modify the combined teachings as described to provide smooth (that is, damped) animation when returning to a previous view, in view of Robbins.</p>
<p>16. The computer-implemented method of claim 1, wherein changing from translating in the first direction to translating in the second direction until the area beyond the edge of the document is no longer displayed makes the edge of the electronic document appear to be elastically attached to an edge of the touch screen display or to an edge displayed on the touch screen display.</p>	<p>As shown graphically above in connection with the first ground of rejection, Glimpse allows a user to save to the system undo stack a view in which the edge of the document is even with the edge of the screen of a touch screen device. Then, when the user further translates in a preview mode to expose an area beyond the edge as would have been obvious in view of Inside Out, and then releases contact with the screen, the view “snaps” back to that stored in the undo stack, making the edge of the document appear to be elastically attached to the edge of the screen display.</p> <p>Furthermore, Robbins teaches navigating from one sector (preview state) to another sector (saved state) of a map (electronic document). Robbins teaches that the transition can be animated by elastically attaching the map to the edges of the frame or screen:</p> <p style="padding-left: 40px;">When navigating from sector 5 to sector 2 (e.g., from view 610 to view 620 to view 630), the map <i>shrinks and stretches</i> so that the aspect of the selected child view <i>fills the frame or screen</i>. (¶ 84, emphasis added).</p> <p>It would have been obvious to one of ordinary skill in the art to use</p>

Claim	Prior Art
	the elastic animation of Robbins in combination with the panning technique of Glimpse which calls for animating the panning transition between the preview state and the saved state.
17 [a] The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching the edge of the electronic document has a first associated translating distance that corresponds to a distance of movement of the object prior to reaching the edge of the electronic document;	The Glimpse article references tracking of the stylus or finger object on a touch screen (p. 1376-77) and the translation distance prior to reaching an edge clearly can be large in comparison to dimensions of the screen.
17[b] and wherein displaying an area beyond the edge of the electronic document comprises translating the electronic document in the first direction for a second associated translating distance, wherein the second associated translating distance is less than a distance of movement of the object after reaching the edge of the electronic document.	Inside Out shows a small dimension of area beyond the edges, obviously often less than the distance the document has been translated before reaching the edge. (Fig. 27-13, p. 764). It would have been obvious to modify Glimpse by exposing a relatively small area beyond the edges as shown in Inside Out, where the movement required to expose that area is less than the distance the document was translated before reaching the edge.
19[a] A device, comprising:	The Glimpse article discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract).
19[b] a touch screen display;	Glimpse discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract). Inside Out discloses a touch screen Tablet PC. (Fig. 27-10, p. 762)
19[c] one or more processors; memory; and one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the programs including:	Glimpse discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract). Glimpse also discloses using a “Tablet PC...as our pressure sensitive input device.” (p.1376)
19[d] instructions for displaying a first portion of an electronic document;	Glimpse discloses allowing a user to pan to different portions of a document displayed on a multi-level touch screen, including the displaying of a first portion of an electronic document:  Our technique would enable users to preview different magnification levels with light touch input before choosing to remain at the new level with a heavy touch or to return to a previous level by releasing. Similarly a user may click and drag using light input to <i>pan to other portions of the document</i> , easily able to return to their previous position. Taking a temporary glimpse at details that are too small to

Claim	Prior Art
	<p>see clearly (in the case of zooming) or off-screen (in the case of panning) becomes a single touch operation. (p. 1377)(emphasis added).</p>
<p><b>19[e]</b> instructions for detecting a movement of an object on or near the touch screen display;</p>	<p>Glimpse discloses allowing a user to pan to different portions of a document displayed on a multi-level touch screen, including the displaying of a first portion of an electronic document:</p> <p>Our technique would enable users to preview different magnification levels with light touch input before choosing to remain at the new level with a heavy touch or to return to a previous level by releasing. Similarly a user may click and drag using light input to <i>pan to other portions of the document</i>, easily able to return to their previous position. Taking a temporary glimpse at details that are too small to see clearly (in the case of zooming) or off-screen (in the case of panning) becomes a single touch operation. (p. 1377)(emphasis added).</p>
<p><b>19[f]</b> instructions for translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion, in response to detecting the movement;</p>	<p>Glimpse discloses panning to different portions of an electronic document using a progression of light touch to heavy touch and back again. Glimpse teaches that if a light touch is applied, a preview of a second portion of the document is displayed to the user. If the user then applies a heavy touch, the view on the screen when the heavy touch is applied becomes the new saved location. The user then returns to applying a light touch to continue previewing other portions of the document without ever breaking contact with the screen. (p. 1376-77)</p> <p>In addition, the 381 patent admits that the prior art teaches this limitation. The 381 patent teaches that only a portion of a large electronic document can be visible on the small screen of a portable electronic device at a given time. A user can pan electronic documents to display other portions on the screen:</p> <p>As a result of the small size of display screens on portable electronic devices and the potentially large size of electronic files, frequently only a portion of a list or of an electronic document of interest to a user can be displayed on the screen at a given time. Users thus will frequently need to scroll displayed lists or to translate displayed electronic documents. (Col. 2, ln 14-21).</p>
<p><b>19[g]</b> instructions for displaying an area beyond an edge of the electronic</p>	<p>Glimpse discloses a user panning to display various portions of an electronic document, including a second portion, while the object is</p>



Claim	Prior Art
<p>document and displaying a third portion of the electronic document, wherein the third portion is smaller than the first portion, in response to the edge of the electronic document being reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display; and</p>	<p>still detected on the screen with at least a light touch. (p. 1376-77).</p> <p>To the extent displaying an area beyond the edge of a document is not explicitly or inherently disclosed by Glimpse, doing so would have been obvious to one skilled in the art in light of Glimpse, either alone, or in combination with Inside Out, which teaches continuing translation of an electronic document when an edge is reached until an area beyond the edge is displayed on a Tablet PC. (p. 764). One of ordinary skill in the art would have been motivated to combine Glimpse with Inside Out's teaching of Microsoft Word 2003 functions because Glimpse is directed to navigating, exploring, and editing electronic documents on a Tablet PC. Glimpse teaches using a Tablet PC "as our pressure sensitive input device." (p. 1377). The Inside Out reference explains that Tablet PCs can run Microsoft Word 2003. Furthermore, it would have been common sense at the time to use a Microsoft Word 2003 document on a Tablet PC, and therefore, in combination with Glimpse.</p>
<p><b>19[h]</b> instructions for translating the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion, in response to detecting that the object is no longer on or near the touch screen display.</p>	<p>Glimpse teaches that when contact is broken with the screen, the screen automatically pans back to the saved state of the document, which is a fourth portion that is different than the first portion. Combination of Inside Out with Glimpse as described above further includes panning beyond an edge. It would have been obvious to return by panning the document in a second direction because Glimpse teaches "animating this undo graphically" to return to the previous view. (p. 1377). Continuing in the first direction is not an operable option for accomplishing the return.</p> <p>If a Glimpse user has applied a heavy touch while panning around the document, the saved system undo stack (default state) is the location where the user applied the heavy touch (second portion), not the location where the user began panning with a light touch (first portion). Therefore, the restored view (fourth portion) is the same as the second portion and different from the first portion. (p. 1376-77). The view of the second portion prior reaching an edge obscures the previously displayed area beyond the edge.</p> <p>In addition, to the extent (assuming for the sake of argument) panning (translating) in a second direction is not explicitly or inherently disclosed by Glimpse, such action would have been an obvious modification of Glimpse, as modified by Inside Out, in light of the Robbins reference. One of ordinary skill in the art would have been motivated to combine Glimpse with Robbins because both solutions are directed to the problem of navigating electronic documents by panning and zooming. Robbins teaches allowing a</p>

Claim	Prior Art
	<p>user to “glance” at other parts of a document with the option to easily revert back to the previous location. (¶ 9). Glimpse teaches animating a transition from the preview state to the saved state. (p. 1377). Robbins also teaches animating a transition between views while the user is panning. (¶ 75, 86).  In fact, Robbins teaches using a spring-loaded panning animation after a user stops glancing at a region to “snap back to the previous view.” (¶ 9, 71, 75, 86).</p> <p>Because Glimpse calls for animating a transition, it would have been common sense to choose a simple animation that unwinds the panning and pans back from the preview state to the saved state, as more fully disclosed in Robbins. Thus, it would have been obvious to one of ordinary skill in the art to utilize the animations of the Robbins application in implementing the Glimpse technique for undo animation, as modified by Inside Out.</p>
<p><b>20[a]</b> A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:</p>	<p>Glimpse discloses “multi-level input devices such as touch screens and pen-based computers.” (Abstract).  Inside Out discloses a touch screen Tablet PC. (Fig. 27-10, p. 762)</p>
<p><b>20[b]</b> display a first portion of an electronic document;</p>	<p>Glimpse discloses allowing a user to pan to different portions of a document displayed on a multi-level touch screen, including the displaying of a first portion of an electronic document:</p> <p style="padding-left: 40px;">Our technique would enable users to preview different magnification levels with light touch input before choosing to remain at the new level with a heavy touch or to return to a previous level by releasing. Similarly a user may click and drag using light input to <i>pan to other portions of the document</i>, easily able to return to their previous position. Taking a temporary glimpse at details that are too small to see clearly (in the case of zooming) or off-screen (in the case of panning) becomes a single touch operation. (p. 1377)(emphasis added).</p>
<p><b>20[c]</b> Detect a movement of an object on or near the touch screen display;</p>	<p>Glimpse teaches detecting movement of an object on the touch screen display by using a pressure sensitive touch screen to identify multi-level input, including both light touch and heavy touch:</p> <p style="padding-left: 40px;">The technique we propose provides a method for editing objects with a multi-level input device such as a pressure sensitive stylus, <i>pressure sensitive touch screen</i>, or pop-through mouse. We have used both a TabletPC and a touch</p>

Claim	Prior Art
	<p>sensitive DiamondTouch [3] surface as our pressure sensitive input device. (p. 1376)(emphasis added).</p> <p>Glimpse also teaches tracking movement of an object in contact with the pressure sensitive screen:</p> <p>Any multi-state input device that also <i>provides tracking</i> (explicitly, as in the case of the pop-through mouse's on-screen pointer, or implicitly, as in the case of a stylus or finger) can exploit this technique. (p. 1376) (emphasis added).</p> <p>Inside Out discloses stylus input to a touch screen Tablet PC. (Fig. 27-10, p. 762)</p>
<p><b>20[d]</b> translate the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion, in response to detecting the movement;</p>	<p>Glimpse discloses panning to different portions of an electronic document using a progression of light touch to heavy touch and back again. Glimpse teaches that if a light touch is applied, a preview of a second portion of the document is displayed to the user. If the user then applies a heavy touch, the view on the screen when the heavy touch is applied becomes the new saved location. The user then returns to applying a light touch to continue previewing other portions of the document without ever breaking contact with the screen. (p. 1376-77)</p> <p>In addition, the 381 patent admits that the prior art teaches this limitation. The 381 patent teaches that only a portion of a large electronic document can be visible on the small screen of a portable electronic device at a given time. A user can pan electronic documents to display other portions on the screen:</p> <p>As a result of the small size of display screens on portable electronic devices and the potentially large size of electronic files, frequently only a portion of a list or of an electronic document of interest to a user can be displayed on the screen at a given time. Users thus will frequently need to scroll displayed lists or to translate displayed electronic documents. (Col. 2, ln 14-21).</p>
<p><b>20[e]</b> display an area beyond an edge of the electronic document and display a third portion of the electronic document, wherein the third portion is smaller than the first portion, if the edge of the electronic document is reached while translating the electronic document in the first direction while the object is still</p>	<p>Glimpse discloses a user panning to display various portions of an electronic document, including a second portion, while the object is still detected on the screen with at least a light touch. (p. 1376-77).</p> <p>To the extent displaying an area beyond the edge of a document is not explicitly or inherently disclosed by Glimpse, doing so would have been obvious to one skilled in the art in light of Glimpse, either alone, or in combination with Inside Out, which teaches continuing</p>

Claim	Prior Art
<p>detected on or near the touch screen display;</p>	<p>translation of an electronic document when an edge is reached until an area beyond the edge is displayed on a Tablet PC. (p. 764). One of ordinary skill in the art would have been motivated to combine Glimpse with Inside Out's teaching of Microsoft Word 2003 functions because Glimpse is directed to navigating, exploring, and editing electronic documents on a Tablet PC. Glimpse teaches using a Tablet PC "as our pressure sensitive input device." (p. 1377). The Inside Out reference explains that Tablet PCs can run Microsoft Word 2003. Furthermore, it would have been common sense at the time to use a Microsoft Word 2003 document on a Tablet PC, and therefore, in combination with Glimpse.</p>
<p><b>20[f]</b> translate the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion, in response to detecting that the object is no longer on or near the touch screen display.</p>	<p>Glimpse teaches that when contact is broken with the screen, the screen automatically pans back to the saved state of the document, which is a fourth portion that is different than the first portion. Combination of Inside Out with Glimpse as described above further includes panning beyond an edge. It would have been obvious to return by panning the document in a second direction because Glimpse teaches "animating this undo graphically" to return to the previous view. (p. 1377). Continuing in the first direction is not an operable option for accomplishing the return.</p> <p>If a Glimpse user has applied a heavy touch while panning around the document, the saved system undo stack (default state) is the location where the user applied the heavy touch (second portion), not the location where the user began panning with a light touch (first portion). Therefore, the restored view (fourth portion) is the same as the second portion and different from the first portion. (p. 1376-77). The view of the second portion prior reaching an edge obscures the previously displayed area beyond the edge.</p> <p>In addition, to the extent (assuming for the sake of argument) panning (translating) in a second direction is not explicitly or inherently disclosed by Glimpse, such action would have been an obvious modification of Glimpse, as modified by Inside Out, in light of the Robbins reference. One of ordinary skill in the art would have been motivated to combine Glimpse with Robbins because both solutions are directed to the problem of navigating electronic documents by panning and zooming. Robbins teaches allowing a user to "glance" at other parts of a document with the option to easily revert back to the previous location. (¶ 9). Glimpse teaches animating a transition from the preview state to the saved state. (p. 1377). Robbins also teaches animating a transition between views while the user is panning. (¶ 75, 86).</p> <p>In fact, Robbins teaches using a spring-loaded panning animation</p>

Claim	Prior Art
	<p>after a user stops glancing at a region to “snap back to the previous view.” (¶ 9, 71, 75, 86).</p> <p>Because Glimpse calls for animating a transition, it would have been common sense to choose a simple animation that unwinds the panning and pans back from the preview state to the saved state, as more fully disclosed in Robbins. Thus, it would have been obvious to one of ordinary skill in the art to utilize the animations of the Robbins application in implementing the Glimpse technique for undo animation, as modified by Inside Out.</p>

The Glimpse article discloses all of the elements of claim 1 of the '381 patent implemented on a touch screen device except displaying an area beyond an edge of the document in response to reaching the edge. Inside Out discloses displaying an area beyond an edge of the document in response to reaching the edge, on a touch screen device. Glimpse teaches animating a return to a previous view on releasing a pointing device or finger from the screen. The Robbins application teaches translating from and, upon releasing a pointing device or finger from the screen, returning to a previous view using a “spring-loaded animation.” It would have been obvious in light of Inside Out to display an area beyond the edge of a document when practicing the method of Glimpse upon reaching the edge, and, upon releasing contact with the screen, to retrace the initial translating motion in the manner of a retracting spring, in light of the Robbins application. At the end of such motions, according to a mode of operation of the Glimpse method described above, the area beyond the edge of the document would no longer be displayed.

The result of applying the described teaching from Inside Out to the Glimpse article method was predictable, namely, on translating and reaching an edge, an area

beyond the edge would be displayed until the user or the system translated the document to display a portion away from the edge. The result of applying Robbins' spring-loaded return function to the method of Glimpse as modified by Inside Out was predictable, namely, to cause the animation to retrace the previous route of translation in a first direction, just as a "spring" retracts in a second direction opposite to its initial route.

One skilled in the art would have found a clear motivation to modify the Glimpse article with the teachings of Inside Out and the Robbins application, as both Glimpse and Inside Out disclosing using their navigating and display techniques on Tablet PCs and Robbins discloses using its techniques on a portable device with a touch screen or touch pad sensitive to a pointing device. Therefore, it would have been obvious to combine these three references as described to obtain the invention claimed in claim 1.

Independent claims 19 and 20 are device and computer readable medium versions of claim 1, and both read on the combination of the Glimpse article in view of the Robbins application and Inside Out according the same analysis applied above in connection with claim 1. Dependent claims 2-11, 13-16, and 17 would have been obvious for the reasons stated in the above claims chart for this second ground of rejection.

**(c) *Third Ground for Rejection:*** Claims 5, 9, 11, 12, 15, and 18 would have been obvious over the Glimpse article in view of Inside Out, the Robbins application, and the Zimmerman patent.

By comparing the content of the Glimpse article, Inside Out, the Robbins application, and the Zimmerman patent to claims 5, 9, 11, 12, 15, and 18 of the '381

patent, it will become clear that the claimed subject matter would have been obvious to one of ordinary skill in the art.

Claim	Prior Art
<p><b>5.</b> The computer-implemented method of claim 1, wherein the first direction is a vertical direction, a horizontal direction, or a diagonal direction.</p>	<p>The analysis for claims 1 and 5 provided in the Second Ground for Rejection above is incorporated here. The Zimmerman patent further teaches translation in a vertical direction by indicating that: “Electronic image displays of lists that extend beyond the vertical display dimension of the display screen are displaced in the vertical direction by touching the screen with a finger and then moving the finger in the desired direction on the screen.” (Abstract). It would have been obvious to translate documents vertically in the Glimpse method in view of the Zimmerman patent.</p>
<p><b>9.</b> The computer-implemented method of claim 1, wherein the electronic document includes a list of items.</p>	<p>The analysis for claims 1 and 9 provided in the Second Ground for Rejection above is incorporated here. The Zimmerman patent further teaches translation in a vertical direction by indicating that: “Electronic image displays of lists that extend beyond the vertical display dimension of the display screen are displaced in the vertical direction by touching the screen with a finger and then moving the finger in the desired direction on the screen.” (Abstract). It would have been obvious to translate documents including displays of lists vertically in the Glimpse method in view of the Zimmerman patent.</p>
<p><b>11.</b> The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching an edge of the document has an associated speed of translation that corresponds to a speed of movement of the object.</p>	<p>The analysis for claims 1 and 11 provided in the Second Ground for Rejection above is incorporated here. The Zimmerman patent teaches that in a natural manner, the initial speed of displacement of the displayed image corresponds to the speed of motion of the finger along the screen. It would have been obvious to modify the combined teachings as described to provide translation speed corresponding to movement of the pointing object, in view of Zimmerman. (Abstract; col. 3, ln. 54-57).</p>
<p><b>12.</b> The computer-implemented method of claim 1, wherein translating in the first direction is in accordance with a simulation of an equation of motion having friction.</p>	<p>The analysis for claim 1 provided in the Second Ground for Rejection above is incorporated here.</p> <p>Zimmerman discloses translating a list (electronic document) in a first direction while the user maintains contact with the screen, and under some conditions, applies damping to the translation speed:</p> <p>Electronic image displays of lists that extend beyond the vertical display dimension of the display screen are displaced in the vertical direction by touching the screen with a finger and then moving the finger in the desired direction on the screen. In a natural manner the initial speed of displacement of the displayed image corresponds to the speed of motion of the finger along the screen. When the user's finger is disengaged from the screen, the system senses the disengagement and thereafter allows the vertical</p>

Claim	Prior Art
	<p>displacement speed of the image to decrease at a controlled rate. (Abstract).</p> <p>Decreasing a displacement speed at a controlled rate would have been understood to be a damped motion, which the '854 patent treats as the same as following an equation of motion having friction. It would have been obvious to modify the combined teachings as described to provide translation speed in the first direction corresponding to simulation of an equation of motion having friction, in view of Zimmerman. (See col. 3, ln. 54 – col. 4, ln. 37).</p>
<p><b>15.</b> The computer-implemented method of claim 1, wherein translating the document in the second direction is a damped motion.</p>	<p>The analysis for claims 1 and 15 provided in the Second Ground for Rejection above is incorporated here.</p> <p>Zimmerman discloses translating a list (electronic document) in a first direction while the user maintains contact with the screen. When the user breaks contact, the list continues translating but the speed slowly decreases until it reaches zero:</p> <p>Electronic image displays of lists that extend beyond the vertical display dimension of the display screen are displaced in the vertical direction by touching the screen with a finger and then moving the finger in the desired direction on the screen. In a natural manner the initial speed of displacement of the displayed image corresponds to the speed of motion of the finger along the screen. When the user's finger is disengaged from the screen, the system senses the disengagement and thereafter allows the vertical displacement speed of the image to decrease at a controlled rate. (Abstract). (See col. 3, ln. 54 – col. 4, ln. 37).</p> <p>Decreasing a displacement speed at a controlled rate would have been understood to be a damped motion. It would have been obvious to modify the combined teachings as described to provide a damped translation speed in the second direction, in view of Zimmerman and Robbins.</p>
<p><b>18.</b> The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching the edge of the electronic document has a first associated translating speed that corresponds to a speed of movement of the object, and wherein displaying an area beyond the edge of the electronic document comprises translating the electronic document in the first direction at a second associated translating speed,</p>	<p>The analysis for claim 1 provided in the Second Ground for Rejection above is incorporated here.</p> <p>Zimmerman discloses panning a list (electronic document) in a first direction until a specified event occurs. In Zimmerman, the specified event is the user breaking contact with the screen. As long as this event does not occur, the list continues panning at a first speed. When the user breaks contact, the list continues panning but the speed is decreased. (Abstract)</p> <p>It would have been obvious to one skilled in the art to apply the</p>



Claim	Prior Art
wherein the second associated translating speed is slower than the first associated translating speed.	speed decrease of Zimmerman after other kinds of events occur, such as reaching the edge of an electronic document. After reaching an edge, the user would naturally tend to break contact with the screen, resulting in a lower translation speed in a Zimmerman method. (Col. 3, ln. 54 – col. 4, ln. 37). It would have been obvious to one of ordinary skill in the art to modify the combined teachings as described to provide a damped (lower) translation speed during the display of an area beyond the edge of the electronic document, in view of Zimmerman and Robbins.

Claims 5, 11, 12, 15, and 18 depend from Claim 1, which in the First and Second Grounds for Rejection has been shown to read on obvious combinations of prior art not previously considered by the Office.

Claims 5 and 9 are met, respectively, by document movement in the first direction being vertical, and by the document being a list, which are taught by the Zimmerman patent explicitly.

Claim 11 requires a speed of translation prior to reaching an edge of the document that corresponds to the speed of a finger or other object along the screen, which is taught by the Zimmerman patent explicitly.

Claim 12 requires that movement in the first direction is in accordance with a simulation of an equation of motion having friction. The Zimmerman patent teaches damping translating motions. The result of applying this known technique to translation of documents according to the Glimpse article would have been predictable in that a damping effect would have been applied to the translation.

Claim 15 requires damped motion in the second direction, as the area beyond the edge becomes no longer displayed. Zimmerman's damped motion provides a smooth

animation that was predictably applicable to the return animation techniques taught by the other references.

Claim 18 requires moving the document more slowly as the area beyond the edge is displayed. Zimmerman teaches damping the translating motion at the end of a translation. It would have been predictably obvious to apply such damping when displaying an area beyond the edge of a document according to the combination of Glimpse and Inside Out.

Like the other references, Zimmerman relates to translation of electronic documents displayed on a touch screen. It would have been obvious to modify the combination of the Glimpse article method modified by teachings of Inside Out and the Robbins application in accordance with the foregoing teachings of the Zimmerman patent to meet dependent claims 5, 11, 12, 15, and 18.

### **III. Conclusion**

The Glimpse article, Inside Out, and the Robbins application, were not previously considered, and they are not cumulative with the references previously considered. Consideration of obvious combinations of these references in accordance with the proposed Grounds for Rejection, and, for some dependent claims, in view of the Zimmerman patent, leads to the conclusion that these references create substantial new questions of patentability for claims 1-20 of the '381 patent. Third party requester further submits that claims 1-20 must be rejected as unpatentable.

Respectfully submitted,

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# EXHIBIT I

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Ulrich et al.  
U.S. Patent No.: 6,239,795  
Issued: May 29, 2001  
Group Art Unit: 2671  
Serial No: 09/320,947  
Examiner: Phu K. Nguyen  
Filed: May 26, 1999  
For: PATTERN AND COLOR ABSTRACTION IN A  
GRAPHICAL USER INTERFACE  
Attorney Docket No. 0919/01031

April 28, 2010

Mail Stop *Ex Parte* Reexamination  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**REQUEST FOR REEXAMINATION**

Reexamination of United States Patent 6,239,795 (hereinafter, “the ’795 patent”), which issued May 29, 2001 to Ulrich et al. is requested under 35 U.S.C. §§ 302-307, and under 37 C.F.R. § 1.510. This patent is still in force.<sup>1</sup> A copy of the patent in accordance with 37 C.F.R. § 1.510(b)(4) is submitted herewith as Exhibit A.

**I. Claims for which Reexamination is Requested**

The ’795 patent is for a system and method for providing a user with increased flexibility and control over the appearance and behavior of objects on the user interface. Abstract. The patent discloses that sets of objects can be grouped into themes to provide a user with a distinct overall impression of the interface. *Id.* In particular, the ’795 patent states that themes are “coordinated designs of interface objects and object parts

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<sup>1</sup> Indeed, a lawsuit for alleged infringement of the ’795 patent has been filed in the U.S. District Court for the District of Delaware, *Nokia Corp. v. Apple, Inc.*, Case No. 1:09-cv-00791-GMS. That litigation is in its early stages and no discovery regarding the ’795 patent has taken place. If the litigation proceeds, Third Party Requester expects there will be a challenge to the validity of the ’795 patent therein.

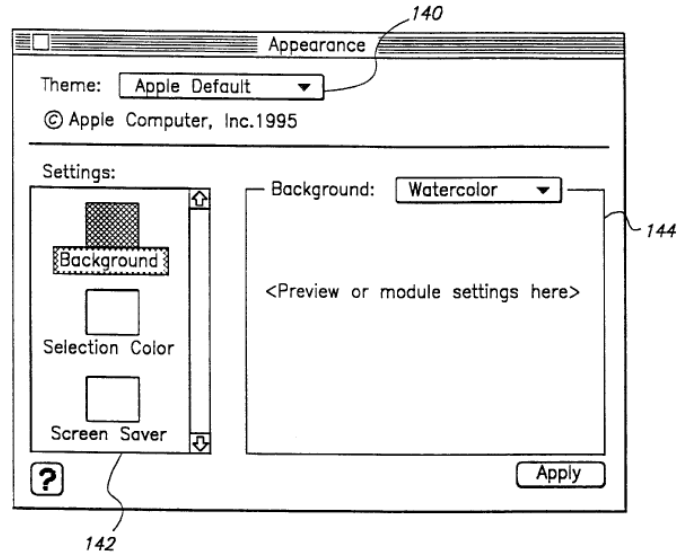
that create a distinct visual appearance on the display,” Col. 5, lines 60-62, and that objects include window objects, icons, menus, lists, control elements, cursors, menu bars, etc., *see* Col. 4, lines 27-34.

According to the '795 patent, themes can be switched dynamically by switching pointers to drawing procedures or switching data being applied to these procedures. *Id.* Additionally, the '795 patent states that to “buffer applications from the switchable nature of graphical user interfaces, colors and patterns used to implement the interface objects are abstracted from the interface by, for example, pattern look-up tables.” *Id.* For purposes of the '795 patent, the term “pattern”

is intended to denote any type of graphic data that can be used in a pattern look-up table to draw in a graphics port. As such, this may be a solid color defined in terms of its red, green and blue (RGB) components, or a pattern defined on a pixel-by-pixel basis, e.g. a PixPat, or a new type of data.

Col. 10, lines 1-7.

A user can implement a theme change through the use of a control panel such as that depicted below:



**FIG. 11**

Reexamination is requested of Claims 1-12 of the '795 patent.

**II. Statement of Substantial New Questions of Patentability**

**A. The Subject Matter of Claim 1-12**

Claims 1-12 recite:

*1. A computer readable medium comprising:*

*a first portion having stored therein data relating to a first set of graphical user interface objects whose individual appearances are collectively associated with a first common theme;*

*a second portion having stored therein data relating to a second set of graphical user interface objects each of which have the same function as an associated interface object in said first set, but whose individual appearances are collectively associated with a second common theme; and*

*a third portion having stored therein computer executable code wherein, upon execution of instructions embedded in said code by a computer, a user interface*

*associated with the computer selectively displays one of said first and second sets of graphical user interface objects.*

- 2. The computer readable medium of claim 1, wherein said executable code further comprises instructions for enabling the user interface to switch from displaying one set of interface objects to another set of interface objects.*
- 3. The computer readable medium of claim 1, wherein said sets of user interface objects include data related to patterns and colors used to create interface objects.*
- 4. The computer readable medium of claim 3, wherein said data is contained within indexed entries of a pattern look-up table.*
- 5. A computer readable medium encoded with a drawing resource that can be used to draw an object on a user interface, said layout resource comprising a plurality of data structures comprising:*

  - a first set of graphical interface objects whose individual appearances are associated with a first common theme; and*
  - a second set of graphical user interface objects each of which have the same function as an associated interface object in said first set, but whose individual appearances are associated with a second common theme.*



6. *The computer readable medium of claim 5, wherein said sets of user interface objects include data related to patterns and colors used to create interface objects.*

7. *The computer readable medium of claim 6 further comprising executable code for instructing said drawing resource to draw the interface object according to one of said themes.*

8. *The computer readable medium of claim 7, where in said code instructs said drawing resource to switch the display from one of said themes to another of said themes.*

9. *A computer system comprising:*

*a storage means for storing data relating to first and second sets of graphical user interface objects;*

*a user interface for selectively displaying one of said sets of graphical user interface objects; and*

*a control means for switching the display from one set of graphical interface objects to another set of graphical interface objects,*

*wherein individual appearances of the first set of graphical interface objects are*

*collectively associated with a first common theme and each of the second set of*

*graphical interface objects having the same function as an associated interface object*

*in said first set, but whose individual appearances are collectively associated with a*

*second common theme.*

10. *The computer system of claim 9, wherein said sets of user interface objects include data related to patterns and colors used to create interface objects.*
11. *The computer system of claim 10, wherein said storage means further stores a pattern look-up table with indexed entries containing data related to patterns and colors used to create the interface objects.*
12. *A computer system comprising:*
- a storage means for storing data relating to first and second sets of graphical user interface objects;*
  - a graphical user interface for selectively displaying one of said sets of graphical user interface objects; and*
  - a selection means for switching the display from one set of interface objects to another set of interface objects, whereby the user interface displays interface objects using one of the sets of graphical user interface objects, said selection means including:*
    - a control layer having a pattern look-up table with indexed entries containing data related to patterns and colors used to create interface objects; and*
    - a command means for commanding the control layer to draw a pattern on the interface referring to at least one of the indexed entries in the pattern look-up table, wherein individual appearances of the first set of graphical interface objects are collectively associated with a first common theme and each of the second set of graphical interface objects having the same function as an associated interface object*

*in said first set, but whose individual appearances are collectively associated with a second common theme.*

In reexamination, as with any proceeding before the U.S. Patent and Trademark Office (“USPTO”), the terms and phrases of a claim are given their broadest reasonable construction. *E.g., In re American Academy of Science Tech Center*, 367 F.3d 1359, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004) (“During examination, ‘claims ... are to be given their broadest reasonable interpretation . . .’” (*quoting In re Bond*, 910 F.2d 831, 833, 15 USPQ2d 1566 (Fed. Cir. 1990))).

#### **B. Newly cited Prior Art**

The ’795 patent matured from U.S. Application No. 09/320,947 (“the ’947 application”) filed May 26, 1999. The ’947 application is a continuation of U.S. Application No. 08/797,451 (now U.S. Patent No. 5,963,206) filed on February 7, 1999, which application is a continuation-in-part of U.S. Application No 08/242,963 (now abandoned), filed on May 16, 1994. Therefore, the “Critical Date” for prior art relevant to the claims of the ’795 patent, under 35 U.S.C. § 102(b) is May 16, 1993.

The requester respectfully submits that the prior art under § 102(b) taught or suggested the subject matter of Claims 1-12 of the ’795 patent. More particularly, the Requester submits that

- Jim Boyce, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991) (hereinafter “Boyce”) (Exhibit B)

anticipated the subject matter of Claims 1-12 of the ’795 patent, particularly considering the meaning in the art of terms therein as shown in

- Microsoft Press, COMPUTER DICTIONARY, p. 256-57 (hereinafter “the Microsoft Dictionary”) (Exhibit C).

Furthermore, the Requester notes that neither Boyce nor the Microsoft Dictionary were listed on the face of the '795 patent, and both provide new subject matter. In that regard, Requester notes that no Windows documents were cited during prosecution of the '947 application. Consequently, Boyce and the Microsoft Dictionary are newly applied and unquestionably raise new questions of patentability as described below.

**C. Basis for Substantial New Questions of Patentability**

Boyce discloses that Windows 3 provides a user the ability, through the use of a control panel such as those shown in Figures 9.2 and 9.3, to switch between a first color scheme or theme (e.g., the Monochrome color scheme shown in Figures 9.2 and 9.3) and a second color scheme or theme (e.g., the Ocean color scheme discussed on page 205). *See* pp. 204-205. As set forth in detail below, Claims 1-12 of the '795 patent are not patentably distinguishable over Boyce and the discussion presented therein regarding changing desktop colors and patterns, particularly in view of the meaning of the term “palette” as used therein to persons of skill in the art, as set forth by the Microsoft Dictionary. Thus, Boyce and the Microsoft Dictionary raise new questions of patentability.

**D. Application of Boyce to Claims 1-12**

**1. Content of the Prior Art**

**(a) Boyce**

Boyce is a published manual that provides instructions to individuals interested in learning about and utilizing all of the features present in Microsoft's Windows 3. In particular, Boyce provides a detailed discussion regarding how to change the appearance

of the user's computer desktop, including easy switching between color schemes affecting multiple desktop window components (objects). To wit:

One of the most common uses for the Control Panel is to change the colors assigned to various parts of the desktop. Using the Color icon in the Control Panel, you can select colors for individual screen components or new color schemes for the entire desktop. Control Panel does this by changing settings in the [colors] section of WIN.INI. There are 13 color settings that the Control Panel can change, as listed in Table 9.1.

Every color setting in the [colors] section of WIN.INI has the same format – the setting name, followed by entries for the red, green and blue components of the final display color.

ColorSettingName=Red Green Blue

**Table 9.1**  
**Color Settings in [colors] section of WIN.INI**

<i>Setting</i>	<i>Description</i>
ActiveBorder=	Active window border.
ActiveTitle=	Active window title bar.
AppWorkspace=	Application work space, such as the background color of the Program Manager window.
Background=	The color of the desktop.
InactiveBorder=	Inactive window borders.
InactiveTitle=	Inactive window titles.
Menu=	Background color for all menus.
MenuText=	Color of text in all menus.
Scrollbar=	Color of horizontal and vertical scrollbars.
TitleText=	Color of text in the active window title bar.
Window=	The color of the background for each window, such as the color of open-group windows in the Program Manager window.
WindowFrame=	Color of all window frames.
WindowText=	Color of text inside a window, such as the color of text in Notepad.

There are also six other settings you can control if you directly edit the WIN.INI file. You cannot set the following six settings from the Control Panel:

<i>Setting</i>	<i>Description</i>
ButtonFace=	Color of buttons, such as OK and Cancel.
ButtonShadow=	The shadow color that appears below the right edge of each button.
ButtonText=	The color of text on the face of a button, such as the "OK" on the OK button.
GrayText=	Color of commands and options that are not available (dimmed).
Hilight=	Background color for highlighted text.
HilightText=	Text color of highlighted text.

The following example makes the color button text bright yellow by mixing equal amounts of red and green (255 each) and omitting any blue (0):

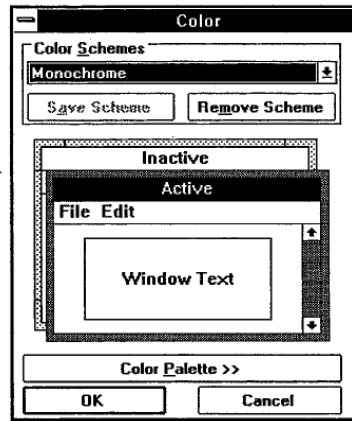
ButtonText=255 255 0

A complete discussion of how Windows works with colors is found in later sections of this chapter.

### Using Color Schemes

When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists the existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. The changes are immediate and can be seen in the sample image in the dialog box.

**Figure 9.2.**  
Control options for  
Windows colors.



If you want to change individual components of the desktop, choose the Color **P**alette >> button. This button expands the Color dialog box to include the Screen **E**lement, **B**asic Colors, and **C**ustom Colors sections of the color palette editor (see Figure 9.3).

Using the Screen **E**lement drop-down list, you can access the 13 window components listed in the CONTROL.INI file (see Table 9.1). To change a specific component, highlight the window component you want to change from the drop-down list. When you do, it is placed in the Screen **E**lement box, and any color selection you make is assigned to the chosen component. The change is immediate and can be seen in the Color **S**chemes section of the dialog box, which provides a preview of how the final display will look.

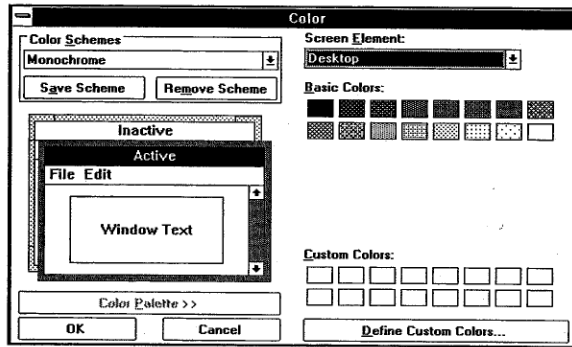


Figure 9.3.  
Color Palette Editor  
dialog box.

Some of the window components can display as pure colors or *dithered* colors (a mixture of pure colors). Other window components are limited to the pure color set supported by your computer's video card and video driver. You can assign a dithered color to the desktop (the Background= setting in WIN.INI), for example, but the window background (the Window= setting in WIN.INI) is limited to only pure colors. If your computer's adapter and driver only display 16 colors, and you select one of the predefined colors from the **B**asic Color section, the window background may be a different color from the one you selected.

The following exercise changes some of the window components. It starts with one of the predefined schemes, then changes a few of the individual components. To change some window components, follow these steps:

1. Activate the Main program group.
2. Choose the Control Panel icon.
3. Choose the Color icon.
4. Choose the Color Schemes drop-down list.
5. Scroll down to the Ocean color scheme.
6. Choose the Ocean color scheme.  
The pattern is previewed in the sample.
7. Select OK.  
The change is made to the desktop.

This changes your color scheme into a predefined pattern.

Pp. 202-05.

Requester notes that term "palette" as used in Boyce has a particular meaning within the computer art. Specifically, the term "palette" means:

[a] subset of the color look-up table that establishes the colors that can be displayed on the screen at a particular time. The number of colors in a palette is determined by the number of bits used to represent a pixel. For example, a pixel represented by 4 bits can have one of 16 colors.

Likewise, the number of bits used to represent a pixel determines the size of the palette. Using the same example, a 4-bit pixel would allow a palette size with 16 entries.

Microsoft Press, Computer Dictionary, p. 256-57 (hereinafter “the Microsoft Dictionary”) (Exhibit C).

In sum, Boyce discloses that Windows 3 provides a user the ability, through the use of a control panel such as those shown in Figures 9.2 and 9.3, to switch between a first color scheme or theme (e.g., the Monochrome color scheme shown in Figures 9.2 and 9.3) and a second color scheme or theme (e.g., the Ocean color scheme discussed on page 205). *See* pp. 204-205. Switching from one color scheme to another will switch various aspects of components of the desktop appearance, including: the color and/or pattern of the desktop, inactive window borders and titles, active window borders and titles, the color of background and text in menus, the color and/or pattern of all window frames and the color and/or pattern of horizontal and vertical scrollbars. *See* Table 9.1, p. 203; Figure 9.3, p. 205. These components include multiple “desktop objects” as that term is defined in the specification of the ’795 patent. (Col. 4, ln. 27-34).

**(b) Microsoft Dictionary**

The Microsoft Dictionary defines the term “palette” as follows:

[a] subset of the color look-up table that establishes the colors that can be displayed on the screen at a particular time. The number of colors in a palette is determined by the number of bits used to represent a pixel. For example, a pixel represented by 4 bits can have one of 16 colors. Likewise, the number of bits used to represent a pixel determines the size of the palette. Using the same example, a 4-bit pixel would allow a palette size with 16 entries.

Exhibit C, pp. 256-57.



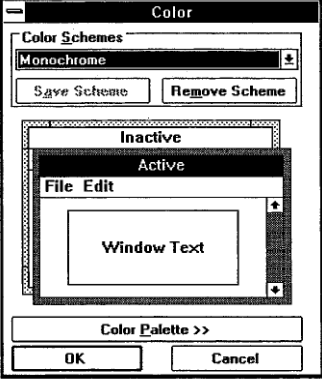
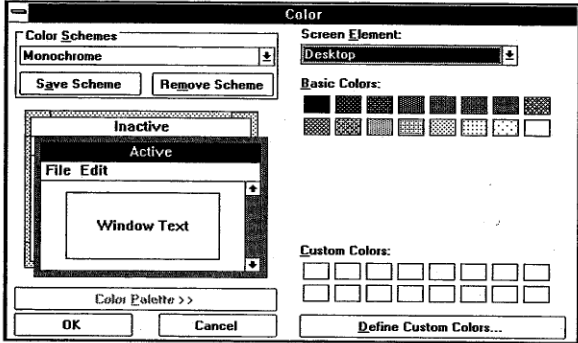
## 2. Grounds for Rejection

### (a) *First Ground for Rejection: Claims 1-12 are Anticipated by Boyce<sup>2</sup>*

By comparing the content of Boyce to Claim 1-12 of the '795 patent, it will be apparent to one of ordinary skill in the art that Boyce anticipated the claimed subject matter.

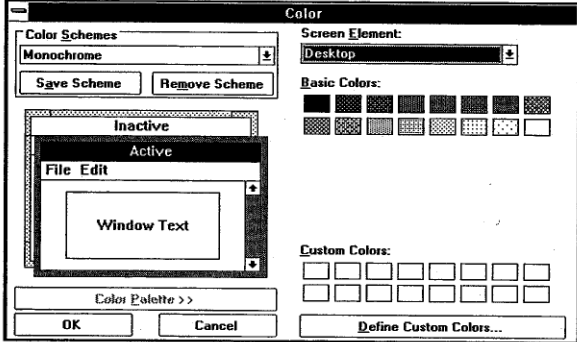
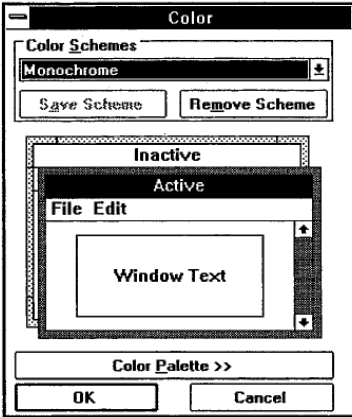
Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments
1. A computer readable medium comprising:	<p>Boyce describes distribution of Windows 3 including Control Panel functions that alter desktop appearance by way of floppy disks, a computer readable medium:</p> <p><i>“To install Windows, follow these steps:</i></p> <ol style="list-style-type: none"> <li><i>1. Insert Windows distribution diskette #1 in the floppy disk drive.</i></li> <li><i>2. Make the drive current.</i></li> <li><i>3. Type <b>SETUP</b> and press Return.</i></li> <li><i>4. When prompted by Setup, type the drive and directory in which to install Windows.</i></li> <li><i>5. Setup displays the hardware selection screen.</i></li> </ol> <p><i>The hardware is usually selected properly, but you should verify each entry to make sure.</i></p> <ol style="list-style-type: none"> <li><i>6. Setup begins installing the Windows files.</i></li> <li><i>7. Setup prompts you with options for changing the AUTOEXEC.BAT and CONFIG.SYS files.</i></li> </ol> <p><i>You can choose to let Setup make the changes, review the changes before they are made, or save the intended changes to temporary files (which you can later edit and copy to the AUTOEXEC.BAT and CONFIG.SYS files).</i></p> <ol style="list-style-type: none"> <li><i>8. When Setup completes the installation process, it gives you the option to reboot the system. You should do so, in order to incorporate any changes that were made in the AUTOEXEC.BAT and CONFIG.SYS files.</i></li> </ol> <p><i>Setup copies all necessary Windows files to the hard disk in the directory you specified. They include application files, help files, device drivers, font files, and other files Windows needs to run on your computer.”</i></p> <p>P. 609.</p>	
a first portion having stored therein data relating to a first set of graphical	<p>Boyce describes Windows 3 software including a first color scheme or theme (e.g., the Monochrome color scheme shown in Figures 9.2 and 9.3) which stores data relating to appearance attributes of a set of graphical user interface objects collectively associated with that color scheme:</p> <p><i>“When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by</i></p>	According to the '795 patent: “As used herein, the terms ‘theme’ and ‘themes’ refer to coordinated designs of interface objects and object parts that

<sup>2</sup> In the claim chart below, for Claims 4, 11 and 12, reference is made to the Microsoft Dictionary for the meaning of the term “palette.” The use of multiple references for an anticipation rejection is proper where, as here, the secondary reference is being used to explain the meaning of a term used in the primary reference. MPEP § 2131.01 and *In re Baxter Travenol Labs.*, 952 F.2d 388 (Fed. Cir. 1991).

Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments
<p>user interface objects whose individual appearances are collectively associated with a first common theme;</p>	<p><i>selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. These changes are immediate and can be seen in the sample image in the dialog box.</i></p> <div data-bbox="354 499 503 569" data-label="Caption"> <p><b>Figure 9.2.</b> Control options for Windows colors.</p> </div>  <p><i>If you want to change individual components of the desktop, choose the Color Palette &gt;&gt; button. This button expands the Color dialog box to include the Screen Element, Basic Colors, and Custom Colors sections of the color palette editor (see Figure 9.3).</i></p> <p><i>Using the Screen Element drop-down list, you can access the 13 window components listed in the CONTROL.INI file (see Table 9.1). To change a specific component, highlight the window component you want to change from the drop-down list. When you do, it is placed in the Screen Element box, and any color selection you make is assigned to the color component. The change is immediate and can be seen in the Color Schemes section of the dialog box, which provides a preview of how the final display will look.</i></p> <div data-bbox="354 1226 928 1566" data-label="Image">  </div> <div data-bbox="956 1312 1112 1381" data-label="Caption"> <p><b>Figure 9.3.</b> Color Palette Editor dialog box.</p> </div> <p>Pp. 204-205.</p>	<p>create a distinct visual appearance on the display.” ’795 Patent, Col. 5, lines 60-62. Additionally, the ’795 patents states: “Further, while window objects are used to illustrate how exemplary embodiments of the present invention affect the appearance and behavior of desktop objects in general, those skilled in the art will recognize that the present invention can be used to control the appearance and behavior of any desktop object including, for example, icons, menus, lists, control elements, cursors, menu bars, etc.” ’795 Patent, Col. 4, lines 27-34.</p>

Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments																																										
	<p style="text-align: center;"><b>Table 9.1</b> <b>Color Settings in [colors] section of WIN.INI</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Setting</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>ActiveBorder=</td> <td>Active window border.</td> </tr> <tr> <td>ActiveTitle=</td> <td>Active window title bar.</td> </tr> <tr> <td>AppWorkspace=</td> <td>Application work space, such as the background color of the Program Manager window.</td> </tr> <tr> <td>Background=</td> <td>The color of the desktop.</td> </tr> <tr> <td>InactiveBorder=</td> <td>Inactive window borders.</td> </tr> <tr> <td>InactiveTitle=</td> <td>Inactive window titles.</td> </tr> <tr> <td>Menu=</td> <td>Background color for all menus.</td> </tr> <tr> <td>MenuText=</td> <td>Color of text in all menus.</td> </tr> <tr> <td>Scrollbar=</td> <td>Color of horizontal and vertical scrollbars.</td> </tr> <tr> <td>TitleText=</td> <td>Color of text in the active window title bar.</td> </tr> <tr> <td>Window=</td> <td>The color of the background for each window, such as the color of open-group windows in the Program Manager window.</td> </tr> <tr> <td>WindowFrame=</td> <td>Color of all window frames.</td> </tr> <tr> <td>WindowText=</td> <td>Color of text inside a window, such as the color of text in Notepad.</td> </tr> </tbody> </table> <p>There are also six other settings you can control if you directly edit the WIN.INI file. You cannot set the following six settings from the Control Panel:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Setting</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>ButtonFace=</td> <td>Color of buttons, such as OK and Cancel.</td> </tr> <tr> <td>ButtonShadow=</td> <td>The shadow color that appears below the right edge of each button.</td> </tr> <tr> <td>ButtonText=</td> <td>The color of text on the face of a button, such as the "OK" on the OK button.</td> </tr> <tr> <td>GrayText=</td> <td>Color of commands and options that are not available (dimmed).</td> </tr> <tr> <td>Highlight=</td> <td>Background color for highlighted text.</td> </tr> <tr> <td>HighlightText=</td> <td>Text color of highlighted text.</td> </tr> </tbody> </table> <p>P. 203.</p>	Setting	Description	ActiveBorder=	Active window border.	ActiveTitle=	Active window title bar.	AppWorkspace=	Application work space, such as the background color of the Program Manager window.	Background=	The color of the desktop.	InactiveBorder=	Inactive window borders.	InactiveTitle=	Inactive window titles.	Menu=	Background color for all menus.	MenuText=	Color of text in all menus.	Scrollbar=	Color of horizontal and vertical scrollbars.	TitleText=	Color of text in the active window title bar.	Window=	The color of the background for each window, such as the color of open-group windows in the Program Manager window.	WindowFrame=	Color of all window frames.	WindowText=	Color of text inside a window, such as the color of text in Notepad.	Setting	Description	ButtonFace=	Color of buttons, such as OK and Cancel.	ButtonShadow=	The shadow color that appears below the right edge of each button.	ButtonText=	The color of text on the face of a button, such as the "OK" on the OK button.	GrayText=	Color of commands and options that are not available (dimmed).	Highlight=	Background color for highlighted text.	HighlightText=	Text color of highlighted text.	
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<p>a second portion having stored therein data relating to a second set of graphical user interface objects each of which have the same function as an associated interface object in said first set, but whose individual appearances are collectively associated with a second</p>	<p>Boyce describes Windows 3 software including a second color scheme or theme (e.g., the Ocean color scheme) which stores data relating to attributes of a set of graphical user interface components or objects collectively associated with that color scheme. Each of the objects in the Ocean color scheme has the same function as that object in the Monochrome color scheme. (pp. 203-205)</p> <p><b><i>“Using Color Schemes</i></b></p> <p><i>When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists the existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. The changes are immediate and can be seen in the sample image in the dialog box.</i></p> <p>...</p> <p><i>4. Choose the Color Schemes drop-down list.</i></p> <p><i>5. Scroll down to the Ocean color scheme.</i></p> <p><i>6. Choose the Ocean color scheme. The pattern is previewed in the sample.”</i></p> <p>(pp. 202-205)</p>																																											

Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments
<p>common theme; and</p> <p>a third portion having stored therein computer executable code wherein, upon execution of instructions embedded in said code by a computer, a user interface associated with the computer selectively displays one of said first and second sets of graphical user interface objects.</p>	<p>Boyce describes Windows 3 software including Control Panel code for displaying a selected color scheme.</p> <p><i>“The following exercise changes some of the window components. It starts with one of the predefined schemes, then changes a few of the individual components. To change some window components, follow these steps:</i></p> <ol style="list-style-type: none"> <li>1. <i>Activate the Main program group.</i></li> <li>2. <i>Choose the Control Panel icon.</i></li> <li>3. <i>Choose the Color icon.</i></li> <li>4. <i>Choose the Color Schemes drop-down list.</i></li> <li>5. <i>Scroll down to the Ocean color scheme.</i></li> <li>6. <i>Choose the Ocean color scheme.</i></li> </ol> <p><i>The pattern is previewed in the sample.</i></p> <p>7. <i>Select OK</i></p> <p><i>The change is made to the desktop.</i></p> <p><i>This changes your color scheme into a predefined pattern.”</i></p> <p>(p. 205).</p>	
<p>2. The computer readable medium of claim 1, wherein said executable code further comprises instructions for enabling the user interface to switch from displaying one set of interface objects to another set of interface objects.</p>	<p>Boyce describes Windows 3 software including Control Panel code for switching between color schemes.</p> <p><i>“The following exercise changes some of the window components. It starts with one of the predefined schemes, then changes a few of the individual components. To change some window components, follow these steps:</i></p> <ol style="list-style-type: none"> <li>1. <i>Activate the Main program group.</i></li> <li>2. <i>Choose the Control Panel icon.</i></li> <li>3. <i>Choose the Color icon.</i></li> <li>4. <i>Choose the Color Schemes drop-down list.</i></li> <li>5. <i>Scroll down to the Ocean color scheme.</i></li> <li>6. <i>Choose the Ocean color scheme.</i></li> </ol> <p><i>The pattern is previewed in the sample.</i></p> <p>7. <i>Select OK</i></p> <p><i>The change is made to the desktop.</i></p> <p><i>This changes your color scheme into a predefined pattern.”</i></p> <p>(P. 205).</p>	

Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments
<p>3. The computer readable medium of claim 1, wherein said sets of user interface objects include data related to patterns and colors used to create interface objects.</p>	<p>Boyce describes Windows 3 software including Control Panel code for displaying a color palette used to select colors for interface objects.</p> <p><i>“Using the Screen Element drop-down list, you can access the 13 window components listed in the CONTROL.INI file (see Table 9.1). To change a specific component, highlight the window component you want to change from the drop-down list. When you do, it is placed in the Screen Element box, and any color selection you make is assigned to the color component. The change is immediate and can be seen in the Color Schemes section of the dialog box, which provides a preview of how the final display will look.</i></p>  <p><i>Figure 9.3. Color Palette Editor dialog box.</i></p> <p>Pp. 204-205.</p>	<p>Note that the Basic Colors in Figure 9.3 include patterns and colors.</p>
<p>4. The computer readable medium of claim 3, wherein said data is contained within indexed entries of a pattern look-up table.</p>	<p>Boyce describes Windows 3 software including a look-up table containing indexed entries representing color scheme data.</p> <p><i>“When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. These changes are immediate and can be seen in the sample image in the dialog box.</i></p>  <p><i>Figure 9.2. Control options for Windows colors.</i></p> <p><i>If you want to change individual components of the desktop, choose the Color Palette &gt;&gt; button. This button expands the Color dialog box to include the Screen Element, Basic Colors, and Custom Colors sections of the color palette</i></p>	<p>The term “Palette” means: “A subset of the color look-up table that establishes the colors that can be displayed on the screen at a particular time. The number of colors in a palette is determined by the number of bits used to represent a pixel. For example, a pixel represented by 4 bits can have one of 16 colors. Likewise, the number of bits used to represent a pixel determines the size of the palette. Using the same example, a 4-bit pixel would allow a palette size with 16 entries.” <i>Computer Dictionary,</i></p>

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	<i>editor (see Figure 9.3).” P. 204.</i>	Microsoft Press, pp. 256-57 (1991).
<p>5. A computer readable medium encoded with a drawing resource that can be used to draw an object on a user interface, said layout resource comprising a plurality of data structures comprising:</p>	<p>Boyce describes distribution of Windows 3 including Control Panel functions that alter desktop appearance by way of floppy disks, a computer readable medium. The software includes a resource for selecting colors for desktop components.</p> <p><i>“To install Windows, follow these steps:</i></p> <ol style="list-style-type: none"> <li><i>1. Insert Windows distribution diskette #1 in the floppy disk drive.</i></li> <li><i>2. Make the drive current.</i></li> <li><i>3. Type <b>SETUP</b> and press Return.</i></li> <li><i>4. When prompted by Setup, type the drive and directory in which to install Windows.</i></li> <li><i>5. Setup displays the hardware selection screen. The hardware is usually selected properly, but you should verify each entry to make sure.</i></li> <li><i>6. Setup begins installing the Windows files.</i></li> <li><i>7. Setup prompts you with options for changing the AUTOEXEC.BAT and CONFIG.SYS files. You can choose to let Setup make the changes, review the changes before they are made, or save the intended changes to temporary files (which you can later edit and copy to the AUTOEXEC.BAT and CONFIG.SYS files).</i></li> <li><i>8. When Setup completes the installation process, it gives you the option to reboot the system. You should do so, in order to incorporate any changes that were made in the AUTOEXEC.BAT and CONFIG.SYS files. Setup copies all necessary Windows files to the hard disk in the directory you specified. They include application files, help files, device drivers, font files, and other files Windows needs to run on your computer.”</i></li> </ol> <p><i>(P. 609).</i></p> <p><i>“One of the most common uses for the Control Panel is to change the colors assigned to various parts of the desktop. Using the Color icon in the Control Panel, you can select colors for individual screen components or new color schemes for the entire desktop. Control Panel does this by changing settings in the [colors] section of WIN.INI. There are 13 color settings that the Control Panel can change, as listed in Table 9.1.”</i></p> <p><i>(P. 202).</i></p>	

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**Table 9.1**  
**Color Settings in [colors] section of WIN.INI**

Setting	Description
ActiveBorder=	Active window border.
ActiveTitle=	Active window title bar.
AppWorkspace=	Application work space, such as the background color of the Program Manager window.
Background=	The color of the desktop.
InactiveBorder=	Inactive window borders.
InactiveTitle=	Inactive window titles.
Menu=	Background color for all menus.
MenuText=	Color of text in all menus.
Scrollbar=	Color of horizontal and vertical scrollbars.
TitleText=	Color of text in the active window title bar.
Window=	The color of the background for each window, such as the color of open-group windows in the Program Manager window.
WindowFrame=	Color of all window frames.
WindowText=	Color of text inside a window, such as the color of text in Notepad.

There are also six other settings you can control if you directly edit the WIN.INI file. You cannot set the following six settings from the Control Panel:

Setting	Description
ButtonFace=	Color of buttons, such as OK and Cancel.
ButtonShadow=	The shadow color that appears below the right edge of each button.
ButtonText=	The color of text on the face of a button, such as the "OK" on the OK button.
GrayText=	Color of commands and options that are not available (dimmed).
Highlight=	Background color for highlighted text.
HighlightText=	Text color of highlighted text.

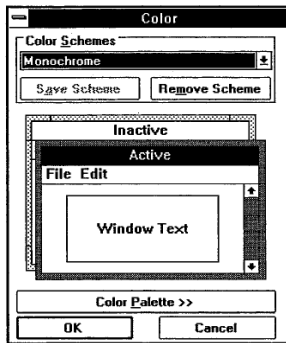
(P. 203).

a first set of graphical interface objects whose individual appearances are associated with a first common theme; and

Boyce describes Windows 3 software including a first color scheme or theme (e.g., the Monochrome color scheme shown in Figures 9.2 and 9.3) which stores data relating to appearance attributes of a set of graphical user interface objects collectively associated with that color scheme:

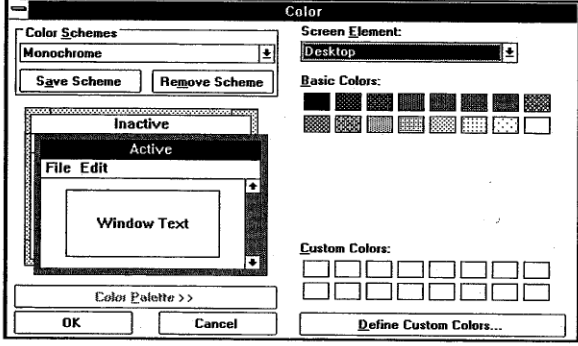
*“When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. These changes are immediate and can be seen in the sample image in the dialog box.*

**Figure 9.2.**  
Control options for Windows colors.

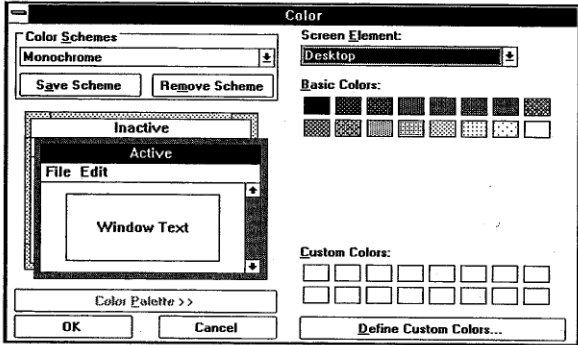
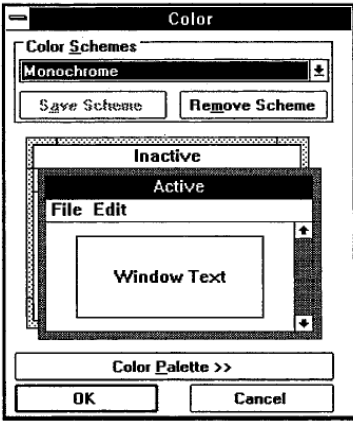


*If you want to change individual components of the desktop, choose the Color Palette >> button. This button expands the Color dialog box to include the Screen Element, Basic Colors, and Custom Colors sections of the color palette editor (see Figure 9.3).*

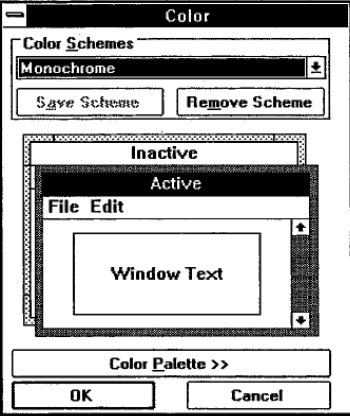
According to the '795 patent: “As used herein, the terms ‘theme’ and ‘themes’ refer to coordinated designs of interface objects and object parts that create a distinct visual appearance on the display.” '795 Patent, Col. 5, lines 60-62. Additionally, the '795 patents states: “Further, while window objects are used to illustrate how exemplary embodiments of the present invention affect the appearance and behavior of desktop objects in general, those skilled in the art will recognize that the present invention can be

Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments
	<p><i>Using the Screen Element drop-down list, you can access the 13 window components listed in the CONTROL.INI file (see Table 9.1). To change a specific component, highlight the window component you want to change from the drop-down list. When you do, it is placed in the Screen Element box, and any color selection you make is assigned to the color component. The change is immediate and can be seen in the Color Schemes section of the dialog box, which provides a preview of how the final display will look.</i></p>  <p><i>Figure 9.3. Color Palette Editor dialog box.</i></p> <p>(Pp. 204-205).</p>	<p>used to control the appearance and behavior of any desktop object including, for example, icons, menus, lists, control elements, cursors, menu bars, etc.” ’795 Patent, Col. 4, lines 27-34.</p>
<p>a second set of graphical user interface objects each of which have the same function as an associated interface object in said first set, but whose individual appearances are associated with a second common theme.</p>	<p>Boyce describes Windows 3 software including a second color scheme or theme (e.g., the Ocean color scheme) which stores data relating to attributes of a set of graphical user interface components or objects collectively associated with that color scheme. Each of the objects in the Ocean color scheme has the same function as that object in the Monochrome color scheme. (pp. 203-205)</p> <p><b>“Using Color Schemes</b></p> <p><i>When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists the existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. The changes are immediate and can be seen in the sample image in the dialog box.</i></p> <p>...</p> <p><i>4. Choose the Color Schemes drop-down list.</i></p> <p><i>5. Scroll down to the Ocean color scheme.</i></p> <p><i>6. Choose the Ocean color scheme.</i></p> <p><i>The pattern is previewed in the sample.”</i></p> <p>(pp. 202-205)</p>	
<p>6. The computer readable medium of claim 5, wherein said</p>	<p>Boyce describes Windows 3 software including Control Panel code for displaying a color palette used to select colors for interface objects.</p> <p><i>“Using the Screen Element drop-down list, you can access the 13 window components listed in the CONTROL.INI file (see Table 9.1). To change a specific component, highlight the window component you want to change from</i></p>	<p>Note that the Basic Colors in Figure 9.3 include patterns and colors.</p>



Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments
<p>sets of user interface objects include data related to patterns and colors used to create interface objects.</p>	<p><i>the drop-down list. When you do, it is placed in the Screen Element box, and any color selection you make is assigned to the color component. The change is immediate and can be seen in the Color Schemes section of the dialog box, which provides a preview of how the final display will look.</i></p>  <p><b>Figure 9.3.</b> Color Palette Editor dialog box.</p> <p>(Pp. 204-205).</p>	
<p>7. The computer readable medium of claim 6 further comprising executable code for instructing said drawing resource to draw the interface object according to one of said themes.</p>	<p>Boyce describes Windows 3 software including a drawing resource for displaying a selected color scheme.</p> <p><i>“When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. These changes are immediate and can be seen in the sample image in the dialog box.</i></p>  <p><b>Figure 9.2.</b> Control options for Windows colors.</p> <p>(P. 204).</p>	
<p>8. The computer readable medium of claim 7, where in said</p>	<p>Boyce describes Windows 3 software including Control Panel code for switching between color schemes.</p> <p><i>“The following exercise changes some of the window components. It starts with one of the predefined schemes, then changes a few of the individual components. To change some window components, follow these steps:</i></p>	

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code instructs said drawing resource to switch the display from one of said themes to another of said themes.	<ol style="list-style-type: none"> <li>1. <i>Activate the Main program group.</i></li> <li>2. <i>Choose the Control Panel icon.</i></li> <li>3. <i>Choose the Color icon.</i></li> <li>4. <i>Choose the Color Schemes drop-down list.</i></li> <li>5. <i>Scroll down to the Ocean color scheme.</i></li> <li>6. <i>Choose the Ocean color scheme.</i> <i>The pattern is previewed in the sample.</i></li> <li>7. <i>Select OK</i> <i>The change is made to the desktop.</i></li> </ol> <p><i>This changes your color scheme into a predefined pattern.”</i> (P. 205).</p>	
9. A computer system comprising:	<p>Boyce describes a computer system programmed with Windows 3 software including Control Panel functions that alter desktop appearance.</p> <p><i>“To install Windows, follow these steps:</i></p> <ol style="list-style-type: none"> <li>1. <i>Insert Windows distribution diskette #1 in the floppy disk drive.</i></li> <li>2. <i>Make the drive current.</i></li> <li>3. <i>Type <b>SETUP</b> and press Return</i></li> <li>4. <i>When prompted by Setup, type the drive and directory in which to install Windows.</i></li> <li>5. <i>Setup displays the hardware selection screen.</i> <i>The hardware is usually selected properly, but you should verify each entry to make sure.</i></li> <li>6. <i>Setup begins installing the Windows files.</i></li> <li>7. <i>Setup prompts you with options for changing the AUTOEXEC.BAT and CONFIG.SYS files.</i> <i>You can choose to let Setup make the changes, review the changes before they are made, or save the intended changes to temporary files (which you can later edit and copy to the AUTOEXEC.BAT and CONFIG.SYS files).</i></li> <li>8. <i>When Setup completes the installation process, it gives you the option to reboot the system. You should do so, in order to incorporate any changes that were made in the AUTOEXEC.BAT and CONFIG.SYS files.</i> <i>Setup copies all necessary Windows files to the hard disk in the directory you specified. They include application files, help files, device drivers, font files, and other files Windows needs to run on your computer.”</i> P. 609.</li> </ol>	
a storage means for storing data relating to first and second sets of graphical user interface objects;	<p>Boyce describes memory for storing data relating to graphical objects. First and second data sets are provided for different color schemes. (See pp. 202-205).</p> <p><i>“Setup copies all necessary Windows files to the hard disk in the directory you specified. They include application files, help files, device drivers, font files, and other files Windows needs to run on your computer.”</i> (P. 609).</p>	Requester has interpreted the term “storage means” to refer to memory. See e.g., '795 Patent, Col. 2, lines 20-30.
a user interface for selectively displaying one of said sets of graphical user	<p>Boyce describes a user interface for displaying graphical user interface objects.</p> <p><i>“Because Windows is aware of hardware, you can run Windows on almost any available DOS-compatible system. The type of system you have, however, determines which of Windows’ run modes are available to you, how Windows manages memory and so on. See Table 4.1, which indicates the recommended minimum and optimum platform for running Windows on different CPUs, depending on the operating mode you want to use. Use this table as a handy</i></p>	

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interface objects; and	<p>reference for the following discussion of these various platforms.</p> <p style="text-align: center;"><b>Table 4.1</b> <b>Minimum and Optimum Windows System Configurations</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th><i>Minimum</i></th> <th><i>Minimum</i></th> <th><i>Minimum</i></th> <th><i>Optimum</i></th> </tr> <tr> <th></th> <th><i>Real Mode</i></th> <th><i>Standard Mode</i></th> <th><i>386-Enhanced Mode</i></th> <th><i>Any Mode</i></th> </tr> </thead> <tbody> <tr> <td><b>CPU</b></td> <td>8088/8086 80286 80386 80486</td> <td>80286 80386 80486</td> <td>80386 80486</td> <td>80386 80486</td> </tr> <tr> <td><b>RAM</b></td> <td>640K</td> <td>1M (640K con. 256K ext.)</td> <td>2M* (640K con. 1M ext.)</td> <td>4M</td> </tr> <tr> <td><b>Hard drive</b></td> <td>6M-8M free</td> <td>8M-10M free</td> <td>10M-12M free</td> <td>20M free</td> </tr> <tr> <td><b>Floppy drive</b></td> <td>5.25" or 3.5"</td> <td>5.25" or 3.5"</td> <td>5.25" or 3.5"</td> <td>HD 5.25" or HD 3.5"</td> </tr> <tr> <td><b>Pointing device</b></td> <td>Mouse or device supported by Windows</td> <td>Mouse or device supported by Windows</td> <td>Mouse or device supported by Windows</td> <td>Mouse or device supported by Windows</td> </tr> </tbody> </table> <p>*If between 1M and 2M, the /3 switch can force 386-enhanced mode.</p> <p><i>In addition to these components, you need a video card and a monitor supported by Windows. The optimum monitor configuration is a high-resolution 800 x 600 VGA or 1024 x 768 SuperVGA.”</i> (Pp. 77-78).</p>		<i>Minimum</i>	<i>Minimum</i>	<i>Minimum</i>	<i>Optimum</i>		<i>Real Mode</i>	<i>Standard Mode</i>	<i>386-Enhanced Mode</i>	<i>Any Mode</i>	<b>CPU</b>	8088/8086 80286 80386 80486	80286 80386 80486	80386 80486	80386 80486	<b>RAM</b>	640K	1M (640K con. 256K ext.)	2M* (640K con. 1M ext.)	4M	<b>Hard drive</b>	6M-8M free	8M-10M free	10M-12M free	20M free	<b>Floppy drive</b>	5.25" or 3.5"	5.25" or 3.5"	5.25" or 3.5"	HD 5.25" or HD 3.5"	<b>Pointing device</b>	Mouse or device supported by Windows	Mouse or device supported by Windows	Mouse or device supported by Windows	Mouse or device supported by Windows	
	<i>Minimum</i>	<i>Minimum</i>	<i>Minimum</i>	<i>Optimum</i>																																	
	<i>Real Mode</i>	<i>Standard Mode</i>	<i>386-Enhanced Mode</i>	<i>Any Mode</i>																																	
<b>CPU</b>	8088/8086 80286 80386 80486	80286 80386 80486	80386 80486	80386 80486																																	
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<b>Pointing device</b>	Mouse or device supported by Windows	Mouse or device supported by Windows	Mouse or device supported by Windows	Mouse or device supported by Windows																																	
a control means for switching the display from one set of graphical interface objects to another set of graphical interface objects,	<p>Boyce describes Control Panel software providing a Color dialog box which provides a Color Schemes drop-down list for switching between color schemes.</p> <p><i>“When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. These changes are immediate and can be seen in the sample image in the dialog box.</i></p> <div style="text-align: center;">  </div> <p><b>Figure 9.2.</b> <i>Control options for Windows colors.</i></p> <p>(P. 204).</p>	Requester has interpreted the term “control means” to refer to a control panel such as that depicted in Fig. 11 of the '795 patent. See '795 Patent, Fig. 11 and Col. 19, line 50 – Col. 20, line 13.																																			
wherein	Boyce describes Windows 3 software providing data to support both a first	According to the																																			

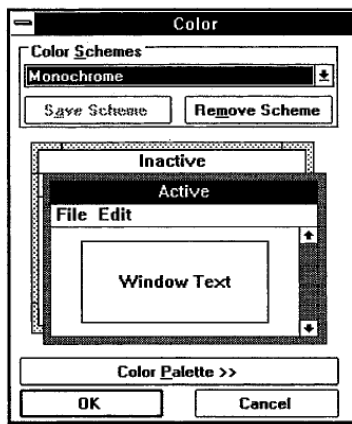
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individual appearances of the first set of graphical interface objects are collectively associated with a first common theme and each of the second set of graphical interface objects having the same function as an associated interface object in said first set, but whose individual appearances are collectively associated with a second common theme.

color scheme or theme (e.g., the Monochrome color scheme shown in Figures 9.2 and 9.3) and a second color scheme or theme (e.g., the Ocean color scheme). The components (objects) associated with a color scheme have the same function in both color schemes.

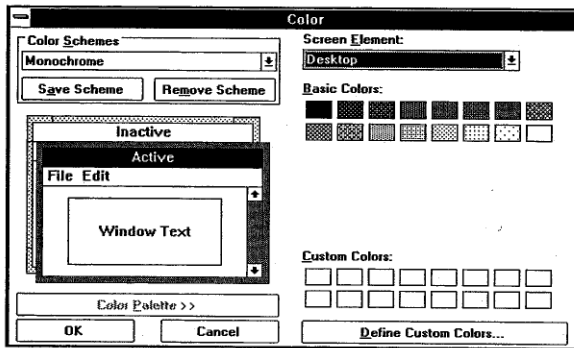
*“When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. These changes are immediate and can be seen in the sample image in the dialog box.*

**Figure 9.2.**  
Control options for Windows colors.



*If you want to change individual components of the desktop, choose the Color Palette >> button. This button expands the Color dialog box to include the Screen Element, Basic Colors, and Custom Colors sections of the color palette editor (see Figure 9.3).*

*Using the Screen Element drop-down list, you can access the 13 window components listed in the CONTROL.INI file (see Table 9.1). To change a specific component, highlight the window component you want to change from the drop-down list. When you do, it is placed in the Screen Element box, and any color selection you make is assigned to the color component. The change is immediate and can be seen in the Color Schemes section of the dialog box, which provides a preview of how the final display will look.*



**Figure 9.3.**  
Color Palette Editor dialog box.

(Pp. 204-205).

'795 patent: “As used herein, the terms ‘theme’ and ‘themes’ refer to coordinated designs of interface objects and object parts that create a distinct visual appearance on the display.” '795 Patent, Col. 5, lines 60-62. Additionally, the '795 patents states: “Further, while window objects are used to illustrate how exemplary embodiments of the present invention affect the appearance and behavior of desktop objects in general, those skilled in the art will recognize that the present invention can be used to control the appearance and behavior of any desktop object including, for example, icons, menus, lists, control elements, cursors, menu bars, etc.” '795 Patent, Col. 4, lines 27-34.

<b>Claim of the '795 Patent</b>	<b>JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)</b>	<b>Comments</b>
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**Table 9.1  
Color Settings in [colors] section of WIN.INI**

Setting	Description
ActiveBorder=	Active window border.
ActiveTitle=	Active window title bar.
AppWorkspace=	Application work space, such as the background color of the Program Manager window.
Background=	The color of the desktop.
InactiveBorder=	Inactive window borders.
InactiveTitle=	Inactive window titles.
Menu=	Background color for all menus.
MenuText=	Color of text in all menus.
Scrollbar=	Color of horizontal and vertical scrollbars.
TitleText=	Color of text in the active window title bar.
Window=	The color of the background for each window, such as the color of open-group windows in the Program Manager window.
WindowFrame=	Color of all window frames.
WindowText=	Color of text inside a window, such as the color of text in Notepad.

There are also six other settings you can control if you directly edit the WIN.INI file. You cannot set the following six settings from the Control Panel:

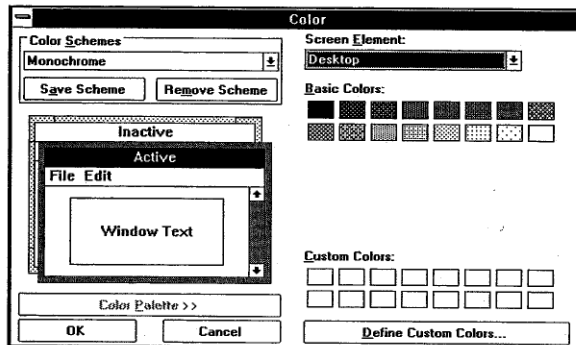
Setting	Description
ButtonFace=	Color of buttons, such as OK and Cancel.
ButtonShadow=	The shadow color that appears below the right edge of each button.
ButtonText=	The color of text on the face of a button, such as the "OK" on the OK button.
GrayText=	Color of commands and options that are not available (dimmed).
Highlight=	Background color for highlighted text.
HighlightText=	Text color of highlighted text.

(P. 203).

10. The computer system of claim 9, wherein said sets of user interface objects include data related to patterns and colors used to create interface objects.

Boyce describes color schemes including color and pattern data for components (objects).

*“Using the Screen Element drop-down list, you can access the 13 window components listed in the CONTROL.INI file (see Table 9.1). To change a specific component, highlight the window component you want to change from the drop-down list. When you do, it is placed in the Screen Element box, and any color selection you make is assigned to the color component. The change is immediate and can be seen in the Color Schemes section of the dialog box, which provides a preview of how the final display will look.*



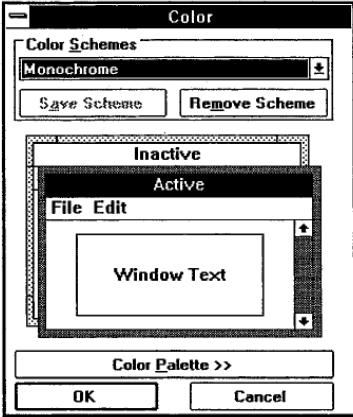
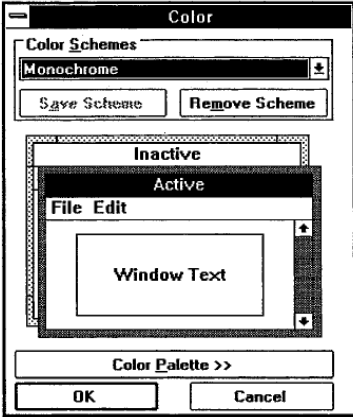
**Figure 9.3.**  
Color Palette Editor dialog box.

(Pp. 204-205).

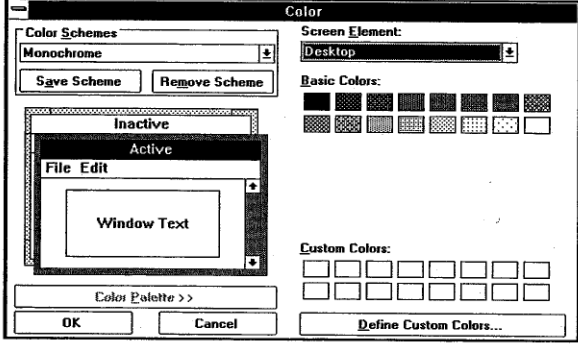
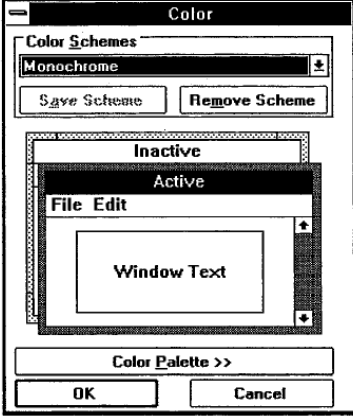
Note that the Basic Colors in Figure 9.3 include patterns and colors.

Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments
<p>11. The computer system of claim 10, wherein said storage means further stores a pattern look-up table with indexed entries containing data related to patterns and colors used to create the interface objects.</p>	<p>Boyce describes Windows 3 software stored on the computer system, including Control Panel code for displaying a color palette used to select colors for interface objects.</p> <p><i>“Setup copies all necessary Windows files to the hard disk in the directory you specified. They include application files, help files, device drivers, font files, and other files Windows needs to run on your computer.” P. 609.</i></p> <p><i>“When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. These changes are immediate and can be seen in the sample image in the dialog box.</i></p> <div data-bbox="354 846 513 919" data-label="Caption"> <p><b>Figure 9.2.</b> Control options for Windows colors.</p> </div> <div data-bbox="708 753 1060 1171" data-label="Image"> </div> <p><i>If you want to change individual components of the desktop, choose the Color Palette &gt;&gt; button. This button expands the Color dialog box to include the Screen Element, Basic Colors, and Custom Colors sections of the color palette editor (see Figure 9.3).” (P. 204).</i></p>	<p>The term “Palette” means: “A subset of the color look-up table that establishes the colors that can be displayed on the screen at a particular time. The number of colors in a palette is determined by the number of bits used to represent a pixel. For example, a pixel represented by 4 bits can have one of 16 colors. Likewise, the number of bits used to represent a pixel determines the size of the palette. Using the same example, a 4-bit pixel would allow a palette size with 16 entries.” <i>Computer Dictionary</i>, Microsoft Press, pp. 256-57 (1991).</p>
<p>12. A computer system comprising:</p>	<p>Boyce describes a computer system programmed with Windows 3 software including Control Panel functions that alter desktop appearance.</p> <p><i>“To install Windows, follow these steps:</i></p> <ol style="list-style-type: none"> <li><i>1. Insert Windows distribution diskette #1 in the floppy disk drive.</i></li> <li><i>2. Make the drive current.</i></li> <li><i>3. Type <b>SETUP</b> and press Return.</i></li> <li><i>4. When prompted by Setup, type the drive and directory in which to install Windows.</i></li> <li><i>5. Setup displays the hardware selection screen. The hardware is usually selected properly, but you should verify each entry to make sure.</i></li> <li><i>6. Setup begins installing the Windows files.</i></li> <li><i>7. Setup prompts you with options for changing the AUTOEXEC.BAT and CONFIG.SYS files.</i></li> </ol> <p><i>You can choose to let Setup make the changes, review the changes before they are made, or save the intended changes to temporary files (which you can later</i></p>	

Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments																																			
	<p><i>edit and copy to the AUTOEXEC.BAT and CONFIG.SYS files).</i></p> <p>8. <i>When Setup completes the installation process, it gives you the option to reboot the system. You should do so, in order to incorporate any changes that were made in the AUTOEXEC.BAT and CONFIG.SYS files.</i></p> <p><i>Setup copies all necessary Windows files to the hard disk in the directory you specified. They include application files, help files, device drivers, font files, and other files Windows needs to run on your computer.</i>"</p> <p>(P. 609).</p>																																				
<p>a storage means for storing data relating to first and second sets of graphical user interface objects;</p>	<p>Boyce describes memory for storing data relating to graphical objects.</p> <p><i>"Setup copies all necessary Windows files to the hard disk in the directory you specified. They include application files, help files, device drivers, font files, and other files Windows needs to run on your computer."</i></p> <p>(P. 609).</p>	<p>Requester has interpreted the term "storage means" to refer to memory. See e.g., '795 Patent, Col. 2, lines 20-30.</p>																																			
<p>a graphical user interface for selectively displaying one of said sets of graphical user interface objects; and</p>	<p>Boyce describes a user interface for displaying graphical user interface objects.</p> <p><i>"Because Windows is aware of hardware, you can run Windows on almost any available DOS-compatible system. The type of system you have, however, determines which of Windows' run modes are available to you, how Windows manages memory and so on. See Table 4.1, which indicates the recommended minimum and optimum platform for running Windows on different CPUs, depending on the operating mode you want to use. Use this table as a handy reference for the following discussion of these various platforms.</i></p> <div style="text-align: center;"> <p><b>Table 4.1</b></p> <p><b>Minimum and Optimum Windows System Configurations</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><i>Minimum</i></th> <th style="text-align: center;"><i>Minimum</i></th> <th style="text-align: center;"><i>Minimum</i></th> <th style="text-align: center;"><i>Optimum</i></th> </tr> <tr> <th></th> <th style="text-align: center;"><i>Real Mode</i></th> <th style="text-align: center;"><i>Standard Mode</i></th> <th style="text-align: center;"><i>386-Enhanced Mode</i></th> <th style="text-align: center;"><i>Any Mode</i></th> </tr> </thead> <tbody> <tr> <td><b>CPU</b></td> <td style="text-align: center;">8088/8086 80286 80386 80486</td> <td style="text-align: center;">80286 80386 80486</td> <td style="text-align: center;">80386 80486</td> <td style="text-align: center;">80386 80486</td> </tr> <tr> <td><b>RAM</b></td> <td style="text-align: center;">640K</td> <td style="text-align: center;">1M (640K con. 256K ext.)</td> <td style="text-align: center;">2M (640K con. 1M ext.)</td> <td style="text-align: center;">4M</td> </tr> <tr> <td><b>Hard drive</b></td> <td style="text-align: center;">6M-8M free</td> <td style="text-align: center;">8M-10M free</td> <td style="text-align: center;">10M-12M free</td> <td style="text-align: center;">20M free</td> </tr> <tr> <td><b>Floppy drive</b></td> <td style="text-align: center;">5.25" or 3.5"</td> <td style="text-align: center;">5.25" or 3.5"</td> <td style="text-align: center;">5.25" or 3.5"</td> <td style="text-align: center;">HD 5.25" or HD 3.5"</td> </tr> <tr> <td><b>Pointing device</b></td> <td style="text-align: center;">Mouse or device supported by Windows</td> <td style="text-align: center;">Mouse or device supported by Windows</td> <td style="text-align: center;">Mouse or device supported by Windows</td> <td style="text-align: center;">Mouse or device supported by Windows</td> </tr> </tbody> </table> <p><small>*If between 1M and 2M, the /3 switch can force 386-enhanced mode.</small></p> <p><i>In addition to these components, you need a video card and a monitor supported by Windows. The optimum monitor configuration is a high-resolution 800 x 600 VGA or 1024 x 768 SuperVGA." Pp. 77-78.</i></p> </div>		<i>Minimum</i>	<i>Minimum</i>	<i>Minimum</i>	<i>Optimum</i>		<i>Real Mode</i>	<i>Standard Mode</i>	<i>386-Enhanced Mode</i>	<i>Any Mode</i>	<b>CPU</b>	8088/8086 80286 80386 80486	80286 80386 80486	80386 80486	80386 80486	<b>RAM</b>	640K	1M (640K con. 256K ext.)	2M (640K con. 1M ext.)	4M	<b>Hard drive</b>	6M-8M free	8M-10M free	10M-12M free	20M free	<b>Floppy drive</b>	5.25" or 3.5"	5.25" or 3.5"	5.25" or 3.5"	HD 5.25" or HD 3.5"	<b>Pointing device</b>	Mouse or device supported by Windows	Mouse or device supported by Windows	Mouse or device supported by Windows	Mouse or device supported by Windows	
	<i>Minimum</i>	<i>Minimum</i>	<i>Minimum</i>	<i>Optimum</i>																																	
	<i>Real Mode</i>	<i>Standard Mode</i>	<i>386-Enhanced Mode</i>	<i>Any Mode</i>																																	
<b>CPU</b>	8088/8086 80286 80386 80486	80286 80386 80486	80386 80486	80386 80486																																	
<b>RAM</b>	640K	1M (640K con. 256K ext.)	2M (640K con. 1M ext.)	4M																																	
<b>Hard drive</b>	6M-8M free	8M-10M free	10M-12M free	20M free																																	
<b>Floppy drive</b>	5.25" or 3.5"	5.25" or 3.5"	5.25" or 3.5"	HD 5.25" or HD 3.5"																																	
<b>Pointing device</b>	Mouse or device supported by Windows	Mouse or device supported by Windows	Mouse or device supported by Windows	Mouse or device supported by Windows																																	
<p>a selection means for switching the display from</p>	<p>Boyce describes Control Panel software providing a Color dialog box which provides a Color Schemes drop-down list for switching between color schemes.</p> <p><i>"When you choose the Color icon in the Control Panel, the Color dialog box</i></p>	<p>Requester has interpreted the term "selection means" to refer to a control</p>																																			

Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments
<p>one set of interface objects to another set of interface objects, whereby the user interface displays interface objects using one of the sets of graphical user interface objects, said selection means including:</p>	<p><i>appears (see Figure 9.2). The first dialog box lists existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. These changes are immediate and can be seen in the sample image in the dialog box.</i></p> <p><b>Figure 9.2.</b> <i>Control options for Windows colors.</i></p>  <p>P. 204.</p>	<p>panel such as that depicted in Fig. 11 of the '795 patent. See '795 Patent, Fig. 11 and Col. 19, line 50 – Col. 20, line 13.</p>
<p>a control layer having a pattern look-up table with indexed entries containing data related to patterns and colors used to create interface objects; and</p>	<p>Boyce describes Windows 3 software including a look-up table containing indexed entries representing color scheme data.</p> <p><i>“When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. These changes are immediate and can be seen in the sample image in the dialog box.</i></p> <p><b>Figure 9.2.</b> <i>Control options for Windows colors.</i></p>  <p><i>If you want to change individual components of the desktop, choose the Color Palette &gt;&gt; button. This button expands the Color dialog box to include the Screen Element, Basic Colors, and Custom Colors sections of the color palette editor (see Figure 9.3).</i></p>	<p>The term “Palette” means: “A subset of the color look-up table that establishes the colors that can be displayed on the screen at a particular time. The number of colors in a palette is determined by the number of bits used to represent a pixel. For example, a pixel represented by 4 bits can have one of 16 colors. Likewise, the number of bits used to represent a pixel determines the size of the palette. Using the same example, a 4-bit pixel would allow a palette size with 16 entries.” <i>Computer Dictionary</i>, Microsoft Press, pp.</p>

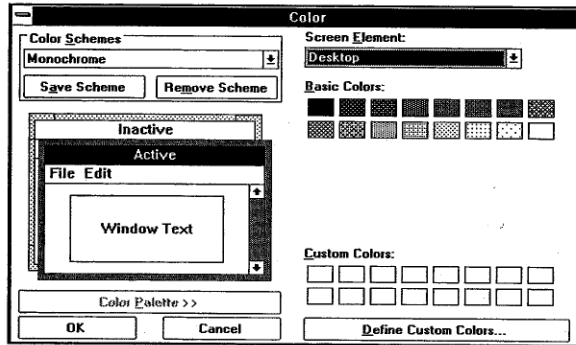


Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments
	<p><i>Using the Screen Element drop-down list, you can access the 13 window components listed in the CONTROL.INI file (see Table 9.1). To change a specific component, highlight the window component you want to change from the drop-down list. When you do, it is placed in the Screen Element box, and any color selection you make is assigned to the color component. The change is immediate and can be seen in the Color Schemes section of the dialog box, which provides a preview of how the final display will look.</i></p>  <p><b>Figure 9.3.</b> Color Palette Editor dialog box.</p> <p>(Pp. 204-205).</p>	256-57 (1991).
<p>a command means for commanding the control layer to draw a pattern on the interface referring to at least one of the indexed entries in the pattern look-up table, wherein individual appearances of the first set of graphical interface objects are collectively associated with a first common theme and each of the second set of graphical interface objects</p>	<p>Boyce describes Windows 3 software including a drawing resource for displaying a selected color scheme, equivalent to that disclosed in the '795 patent.</p> <p><i>“When you choose the Color icon in the Control Panel, the Color dialog box appears (see Figure 9.2). The first dialog box lists existing color schemes in CONTROL.INI. You can choose from one of the predefined color schemes by selecting a color scheme from the drop-down list and then choosing OK. The predefined settings in CONTROL.INI for the chosen color scheme are then applied to the desktop window components. These changes are immediate and can be seen in the sample image in the dialog box.</i></p>  <p><b>Figure 9.2.</b> Control options for Windows colors.</p> <p><i>If you want to change individual components of the desktop, choose the Color Palette &gt;&gt; button. This button expands the Color dialog box to include the Screen Element, Basic Colors, and Custom Colors sections of the color palette editor (see Figure 9.3).</i></p>	<p>Requester has interpreted the term “command means” to refer to the application itself. See '795 Patent, Col. 2, lines 43-45.</p> <p>According to the '795 patent: “As used herein, the terms ‘theme’ and ‘themes’ refer to coordinated designs of interface objects and object parts that create a distinct visual appearance on the display.” '795 Patent, Col. 5, lines 60-62. Additionally, the '795 patents states: “Further, while window objects are used to illustrate how exemplary embodiments of the present invention affect the appearance and behavior of desktop</p>

<b>Claim of the '795 Patent</b>	<b>JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)</b>	<b>Comments</b>
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having the same function as an associated interface object in said first set, but whose individual appearances are collectively associated with a second common theme.

*Using the Screen Element drop-down list, you can access the 13 window components listed in the CONTROL.INI file (see Table 9.1). To change a specific component, highlight the window component you want to change from the drop-down list. When you do, it is placed in the Screen Element box, and any color selection you make is assigned to the color component. The change is immediate and can be seen in the Color Schemes section of the dialog box, which provides a preview of how the final display will look.*



**Figure 9.3.**  
*Color Palette Editor dialog box.*

objects in general, those skilled in the art will recognize that the present invention can be used to control the appearance and behavior of any desktop object including, for example, icons, menus, lists, control elements, cursors, menu bars, etc.” ’795 Patent, Col. 4, lines 27-34.

Pp. 204-205.

**Table 9.1**  
**Color Settings in [colors] section of WIN.INI**

Setting	Description
ActiveBorder=	Active window border.
ActiveTitle=	Active window title bar.
AppWorkspace=	Application work space, such as the background color of the Program Manager window.
Background=	The color of the desktop.
InactiveBorder=	Inactive window borders.
InactiveTitle=	Inactive window titles.
Menu=	Background color for all menus.
MenuText=	Color of text in all menus.
Scrollbar=	Color of horizontal and vertical scrollbars.
TitleText=	Color of text in the active window title bar.
Window=	The color of the background for each window, such as the color of open-group windows in the Program Manager window.
WindowFrame=	Color of all window frames.
WindowText=	Color of text inside a window, such as the color of text in Notepad.

There are also six other settings you can control if you directly edit the WIN.INI file. You cannot set the following six settings from the Control Panel:

Setting	Description
ButtonFace=	Color of buttons, such as OK and Cancel.
ButtonShadow=	The shadow color that appears below the right edge of each button.
ButtonText=	The color of text on the face of a button, such as the "OK" on the OK button.
GrayText=	Color of commands and options that are not available (dimmed).
Highlight=	Background color for highlighted text.
HighlightText=	Text color of highlighted text.

P. 203.

*“The following exercise changes some of the window components. It starts with one of the predefined schemes, then changes a few of the individual components. To change some window components, follow these steps:*

Claim of the '795 Patent	JIM BOYCE, MAXIMIZING WINDOWS 3 GETTING THE MOST FROM MICROSOFT WINDOWS (1991)	Comments
	<ol style="list-style-type: none"> <li>1. <i>Activate the Main program group.</i></li> <li>2. <i>Choose the Control Panel icon.</i></li> <li>3. <i>Choose the Color icon.</i></li> <li>4. <i>Choose the Color Schemes drop-down list.</i></li> <li>5. <i>Scroll down to the Ocean color scheme.</i></li> <li>6. <i>Choose the Ocean color scheme.</i> <i>The pattern is previewed in the sample.</i></li> <li>7. <i>Select OK</i> <i>The change is made to the desktop.</i></li> </ol> <p><i>This changes your color scheme into a predefined pattern.” P. 205.</i></p>	

As pointed out within the foregoing claim chart, Boyce discloses each and every element of Claims 1-12 of the '795 patent. Therefore, it is submitted that Boyce raises a substantial new question of patentability for Claims 1-12.

**(b) Second Ground for Rejection: Claims 1-12 are Obvious over Boyce in view of the Microsoft Dictionary**

The claim chart above presented in connection with the first ground for rejection is incorporated in support of this second ground.

The Federal Circuit has repeatedly held that “anticipation is the epitome of obviousness.” *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983); *see also In re McDaniel*, 293 F.3d 1379 (Fed. Cir. 2002). Because Boyce anticipated Claims 1-12 of the '795 patent by disclosing each and every element of these claims, Claims 1-12 of the '795 patent also would have been obvious over Boyce, particularly in view of the definition of “palette” in the Microsoft Dictionary. To the extent the patent owner may assert minor differences between the control panel of the '795 patent as

claimed, and the control panel described in Boyce, such differences would have been obvious to one skilled in the art.

Hence, it is submitted that Boyce in view of the Microsoft Dictionary raises a substantial new question of patentability for Claims 1-12.

### **III. Conclusion**

Boyce was not previously considered, and is not cumulative with the references previously considered. Thus, for the reasons set forth above, a substantial new question of patentability exists for each of Claims 1-12 of the '795 patent. The Requester accordingly, requests reexamination of Claims 1-12 of the '795 patent and respectfully submits that each of these claims should be rejected as unpatentable in view of the rationales presented herein.

Respectfully submitted,

/Scott E. Brient/

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# Exhibit J

## PRIOR ART REFERENCES

### I. THE 369 PATENT

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- Microsoft Windows for Pen Computing: A Catalog of Products for Mobile Professionals (“Catalog”).
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- U.S. Patent No. 5,522,073 - Method and Apparatus for Automating and Controlling Execution of Software Tools and Tool Sets via When/Then Relationships - To: Courant.
- A Description of the Model-View-Controller User Interface Paradigm in the Smalltalk-80 System – Krasner.
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- E.P. Application - Publication No. 0 408 812 A1 - Distributed Object Based Systems - To: Williams.
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## PRIOR ART REFERENCES

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- U.S. Patent No. 5,041,992 - Interactive Method of Developing Software Interfaces - To: Cunningham.
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- U.S. Patent No. 5,119,475 - Object-Oriented Framework for Menu Definition - To: Smith.
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- U.S. Patent No. 5,371,844 - Palette Manager in a Graphical User Interface Computer System - To: Andrew.
- U.S. Patent No. 5,394,521 - User Interface with Multiple Workspaces for Sharing Display System Objects - To: Henderson.
- U.S. Patent No. 5,438,659 - Object-Action User Interface Management System - To: Notess.

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- U.S. Statutory Invention Reg No.H1506 - Graphical User Interface for Editing Palette of Colors - To: Baretta.

### II. THE 381 PATENT

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