

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHRISTOPHER L. CAPPS,
SCOTT M. HALLIHAN,
BRENDA M. SCOTT,
and GAYLE STEINBUGLER

Appeal No. 2002-1041
Application 08/866,402¹

ON BRIEF

Before BARRETT, FLEMING, and SAADAT, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 20-34.

We affirm-in-part.

¹ Application for patent filed May 30, 1997, entitled "Touch Sensitive Apparatus and Method for Improved Visual Feedback."

BACKGROUND

The invention relates to a system, method, and computer instructions on a computer usable medium for visually indicating that a key on a display screen has been selected. Although the invention is disclosed in connection with a touch screen display, only one claim requires this feature. When a key is selected, the size of the key on the screen enlarges or "splats" and the appearance changes to indicate a depressed key, e.g., by decreasing the size of the bevels of the key graphic.

Claim 20 is reproduced below.

20. In a system having a processor, a display for producing a visual representation of a plurality of keys, a position sensing subsystem for providing signals indicating that an area on the display has been selected by an operator and a memory for storing programming instructions for controlling the operation of the system, an apparatus for providing improved visual feedback to the operator that an area in the visual representation has been selected, said apparatus comprising:

(a) a circuit responsive to signals provided by said the position sensing subsystem to provide an key-identifying signal indicating that a particular key in the visual representation of said plurality of keys has been selected by the operator; and

(b) display control logic responsive to the key-identifying signal to alter the visual representation of the selected key by enlarging said the visual representation and by changing said visual representation to have the appearance of a depressed key, said altered visual representation providing visual confirmation of the key selection.

The examiner relies on the following references:

Greanias et al. (Greanias)	4,686,332	August 11, 1987
Volk et al. (Volk)	5,687,331	November 11, 1997

Appeal No. 2002-1041
Application 08/866,402

(filed August 3, 1995)

Claims 20-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Volk and Greanias.

We refer to the final rejection (Paper No. 15) (pages referred to as "FR__") and the examiner's answer (Paper No. 18) (pages referred to as "EA__") for a statement of the examiner's rejection, and to the appeal brief (Paper No. 17) (pages referred to as "Br__") for a statement of appellants' arguments thereagainst.

OPINION

Obviousness factual findings

Content of the prior art

Volk discloses a viewer interface for use in an interactive television environment, but which can be used with computer software (col. 12, line 60 to col. 13, line 6). Control items on the screen, such as control buttons or icons for "open" and "close" functions, are selected by a user who typically navigates a cursor with a keyboard or mouse, and selects the control item by a keyboard stroke or a mouse click (col. 4, lines 9-16). A selected control item responsive to input is said to have the "focus" (col. 4, lines 26-27) and is indicated by a focus item. "[T]he display of a control item that has the focus is typically altered, for example by highlighting the display of the item or

surrounding the selected control item by a border to indicate to the viewer that the selected control item has the focus."

Col. 4, lines 27-31. For example, a focus ring 105 surrounds the perimeter of control item 102 in Fig. 3A (col. 20, lines 22-24; col. 27, lines 29-32). It can be seen that the focus ring enlarges the visual representation of the control item. Standard focus items include rings, arrows, and pointing fingers (col. 27, line 38). Volk also discloses a button control object 810 in Fig. 8A that executes a single action (col. 28, lines 51-53), having an activated and deactivated modal state, where the visual representation is changed to have the appearance of a depressed (pushed) key when the key is pressed. The invention of Volk is a system for highlighting the currently selected control item by associating an animated "focus item," called a "sprite," with the selected control item to indicate that it is in a state responsive to commands from a user interface (abstract; col. 12, lines 29-31). Volk teaches using multiple focus items in discussing animated focus items, such as varying the size, shape, position, color, moving images, video, sound "or a combination of these elements" (abstract).

Greanias discloses a combined finger touch and stylus detection system for use on the viewing surface of a visual display system (abstract).

Level of ordinary skill in the art

The level of ordinary skill in the art is evidenced by the references. See In re Oelrich, 579 F.2d 86, 91, 198 USPQ 210, 214 (CCPA 1978) ("the PTO usually must evaluate both the scope and content of the prior art and the level of ordinary skill solely on the cold words of the literature"); In re GPAC Inc., 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995) (the Board did not err in adopting the approach that the level of skill in the art was best determined by the references of record); Okajima v. Bourdeau, 261 F.3d 1350, 1355, 59 USPQ2d 1795, 1797 (Fed. Cir. 2001) ("[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown.'"). One of ordinary skill in the art must be presumed to know something about the art apart from what the references expressly disclose. See In re Jacoby, 309 F.2d 513, 516, 135 USPQ 317, 319 (CCPA 1962). See also In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985) (skill in the art must be presumed).

Differences and motivation

The differences and the motivation will be discussed in connection with each claim.

Obviousness

Initially, it is noted that only claim 24 recites a touch screen display, so Greanias is only relevant to claim 24. The "position sensing subsystem for providing signals indicating that an area on the display has been selected by an operator" in claims 20, 26, and 31 reads on the ordinary computer subsystem for sensing the position of a cursor or pointer which is clearly present in Volk. The analysis is limited to Volk except for the rejection of claim 24.

Claim 20

The argued differences are altering the visual representation of the selected key "by enlarging said the visual representation and by changing said visual representation to have the appearance of a depressed key."

Appellants argue that the examiner relies on a general language in Volk suggesting that a programmer can enable any change of appearance that the programmer chooses, but this does not teach the precise changes in display that are claimed (Br10-11). We agree that the rejection, as stated, seems to rely on general language in Volk and is not persuasive for that reason. Nevertheless, Volk does have specific relevant teachings which cannot be ignored. For example, the examiner did refer to Fig. 8A in the rejection (Paper No. 13) and the final rejection

(Paper No. 15), although there is no express discussion that it showed a depressed key.

Volk discloses a visual representation of plurality of keys, where control buttons 102, 103 in Fig. 3A are equivalent to "keys." Volk discloses enlarging the visual representation of the selected button (key) by putting a focus ring 105 around the control items (Fig. 3A; col. 20, lines 2-24). Appellants do not contest that Volk shows enlarging the visual representation.²

Appellants argue that "the characteristic of displaying a depressed key is not found [in Volk]" (Br10). However, Volk discloses that the selected button (key) can be indicated by having the appearance of a depressed key (Fig. 8A).³ Appellants do not address this teaching of Volk.

Thus, we find that Volk separately teaches enlarging the visual representation and displaying a depressed key. Volk teaches using multiple focus items in combination, such as

² As admitted by appellants in their description of the prior art, it was well known to enlarge the visual representation of an item on a touch screen, as taught in U.S. Patent 5,119,079 to Hube et al.

³ It was well known to visually indicate a selected key by displaying a depressed key. For example, the calculator accessory in Windows NT (introduced in 1994) changes the visual representation of a key on keypad to indicate a depressed key and the exit/minimize/maximize buttons on the upper right hand corner of the windows in Windows NT are shown depressed when selected. Similarly, in WordPerfect 6.1 (issued in 1995), which is being used to write this opinion, the buttons on the toolbar and powerbar are displayed as depressed when selected.

varying the size, shape, position, color, moving images, video, sound "or a combination of these elements" (abstract; col. 10, lines 38-39). One of ordinary skill in the art would have been motivated to use multiple known ways of indicating a selected key in combination, such as the enlarging the representation and giving the appearance of a depressed key, in view of this teaching of Volk, to enhance the visual representation of a selected key. Accordingly, we sustain the rejection of claim 20.

Claim 21

Claim 21 calls for enlarging and changing the visual representation of the key occur substantially simultaneously.

The examiner finds that Volk teaches that an animation can have a combination of visual and audible representations (FR3).

Appellants argue that the art does not teach the further distinction of simultaneity and "[t]his point appears to have been outside the Examiner's understanding" (Br11).

It is true that the examiner does not appear to appreciate that a combination of effects does not necessarily mean that they are performed "simultaneously." Nevertheless, we think the disclosure of a combination of effects in Volk would have reasonably suggested to one of ordinary skill in the art that the effects should be performed simultaneously since each effect is

Appeal No. 2002-1041
Application 08/866,402

supposed to indicate the same event of providing focus. Thus, we will sustain the rejection of claim 21.

Claim 22

Claim 22 calls for also changing the coloration of the visual representation.

The examiner notes that Volk teaches that the appearance of control objects may be altered by changing the background colors (FR3).

Appellants argue that there is no suggestion of three changes in a display (Br11).

Volk teaches using multiple focus items in combination, such as varying the size, shape, position, color, moving images, video, sound "or a combination of these elements" (abstract). One of ordinary skill in the art would have been motivated to use multiple known ways of indicating a selected key in combination, such as the enlarging the representation and giving the appearance of a depressed key and using a color change, in view of this teaching of Volk, to enhance the visual representation of a selected key. Thus, we sustain the rejection of claim 22.

Claims 23 and 25

Appeal No. 2002-1041
Application 08/866,402

Claim 23 recites that two types of key identifying signals are provided to distinguish between which portion of a key area has been touched.

We do not find where the examiner addresses this limitation. We have reviewed Volk and find no teaching or suggestion of this limitation. That fact that Volk could be modified to produce the claimed subject matter still requires a suggestion or motivation. See In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992) ("The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.")(citing In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)). The rejection of claim 23, and its dependent claim 25, is reversed.

Claim 24

Claim 24 recites that the position sensing subsystem comprises a touch sensitive overlay on the display.

The examiner has applied Greanias to show a touch sensitive overlay (FR3).

Appellants argue that the distinction remains unaddressed by the examiner (Br12).

The examiner has clearly addressed the touch sensitive overlay using the Greanias patent, albeit in connection with

Appeal No. 2002-1041
Application 08/866,402

claim 20 which does not require this limitation. It would have been obvious to use a touch sensitive overlay in Volk because it was a well known substitute for a mouse pointing system. The rejection of claim 24 is sustained.

Claim 26

The method of claim 26 would have been obvious for the reasons stated in connection with system claim 20. The rejection of claim 26 is sustained.

Claim 27

The method of claim 27 would have been obvious for the reasons stated in connection with system claim 21. The rejection of claim 27 is sustained.

Claim 28

The method of claim 28 would have been obvious for the reasons stated in connection with system claim 22. The rejection of claim 28 is sustained.

Claims 29 and 30

The method of claim 29 would not have been obvious for the reasons stated in connection with system claim 23. There is no

Appeal No. 2002-1041
Application 08/866,402

teaching in Volk of separately sensing the upper and lower portions of the visual representation of the selected key, even though claim 29 is not specific as to exactly what happens when the upper and lower portions are sensed. The rejection of claim 29, and its dependent claim 30, is reversed.

Claim 31

The computer usable medium storing programming instructions of claim 31 would have been obvious for the reasons stated in connection with system claim 20. The rejection of claim 31 is sustained.

Claim 32

The computer usable medium storing programming instructions of claim 32 would have been obvious for the reasons stated in connection with system claim 22. The rejection of claim 32 is sustained.

Claims 33 and 34

The computer usable medium storing programming instructions of claims 33 and 34 would not have been obvious for the reasons stated in connection with system claim 23. There is no teaching in Volk of separately sensing the upper and lower portions of the

Appeal No. 2002-1041
Application 08/866,402

visual representation of the selected key. The rejection of
claims 33 and 34 is reversed.

Appeal No. 2002-1041
Application 08/866,402

CONCLUSION

The rejection of claims 20-22, 24, 26-28, 31, and 32 is sustained. The rejection of claims 23, 25, 29, 30, 33, and 34 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

LEE E. BARRETT)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
MICHAEL R. FLEMING)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
MAHSHID D. SAADAT)	
Administrative Patent Judge)	

Appeal No. 2002-1041
Application 08/866,402

IBM CORPORATION
P.O. BOX 12195
DEPT 9CCA, BLDG 002
RESEARCH TRIANGLE PARK, NC 27709