

noted that there are many alternative ways of implementing the methods and apparatuses of the present invention. For example, although in most cases the default of the scroll disc would correspond to vertical scrolling, in software, the cursor may be moved to the horizontal scroll bar on the screen to actuate horizontal scrolling. It is therefore intended that the following appended claims be interpreted as including all such alterations, permutations, and equivalents as fall within the true spirit and scope of the present invention.

What is claimed is:

1. A user operated input device comprising a housing and a rotary dial positioned relative to an external surface of the housing, the rotary dial providing a control function.

2. The input device as recited in claim 1 wherein the control function is associated with performing an action on a display screen.

3. The input device as recited in claim 2 wherein the control function corresponds to a scrolling feature.

4. The input device as recited in claim 1 wherein the control function is used to control various applications associated with a computer system.

5. The input device as recited in claim 1 wherein the rotary dial is arranged to rotate around an axis in order to implement the control function.

6. The input device as recited in claim 5 wherein the rotary dial rotates within a plane that is substantially parallel to the external surface of the housing.

7. The input device as recited in claim 1 wherein the rotary dial has an engageable face for allowing a user to facilitate rotation of the rotary dial, the engageable face being completely exposed to the user.

8. The input device as recited in claim 7 wherein the engageable face is substantially parallel to the external surface of the housing.

9. The input device as recited in claim 1 wherein the user operated input device is configured for moving a cursor or pointer on a display screen.

10. The input device as recited in claim 1 wherein a substantial portion of the rotary dial is accessible to a user.

11. The input device as recited in claim 1 wherein the rotary dial is tangentially accessible to a user from the entire circumference of the rotary dial.

12. A mouse for moving a cursor or pointer on a display screen, comprising:

a mouse housing; and

a disk coupled to the mouse housing and rotatable about an axis, the disk being configured to facilitate a control function on the display screen, the disk having a touchable surface for rotating the disk about the axis, the touchable surface being completely accessible to a finger of the user such that the disk can be continuously rotated by a simple swirling motion of the finger.

13. The mouse as recited in claim 12 wherein the control function is associated with performing an action on the display screen.

14. The mouse as recited in claim 13 wherein the control function corresponds to a scrolling feature.

15. The mouse as recited in claim 14 wherein the scrolling feature allows a user to move displayed data across a viewing area on the display screen so that a new set of displayed data is brought into view in the viewing area.

16. The mouse as recited in claim 15 wherein the rotation of the rotary dial causes the displayed data to move across the viewing area of the display screen.

17. The mouse as recited in claim 16 wherein the displayed data is moved vertically or horizontally on the display screen.

18. The mouse as recited in claim 17 wherein side to side manipulation of the disk corresponds to horizontal scrolling, and wherein forwards and backwards manipulation of the disk corresponds to vertical scrolling.

19. The computer mouse as recited in claim 12 wherein the mouse housing provides a clicking action for performing an action on a display screen

20. A computer mouse, comprising:

a body moveable by a user;

a disk rotatably coupled to the body about an axis, and having a surface for facilitating movements thereof, the surface being positioned substantially orthogonal (normal) to the axis; and

an encoder for measuring the rotation of the disk.

21. The computer mouse as recited in claim 20 wherein a substantial portion of the surface is exposed outside of the body.

22. The computer mouse as recited in claim 20 wherein the surface is completely accessible to a finger of the user.

23. The computer mouse as recited in claim 20 wherein the disk is configured to facilitate a control function on the display screen.

24. The computer mouse as recited in claim 22 wherein the control function corresponds to a scrolling feature.

25. The computer mouse as recited in claim 20 wherein the disk is positioned relative to a top of the body.

26. The computer mouse as recited in claim 20 wherein the disk is positioned relative to a side of the body.

27. The computer mouse as recited in claim 20 wherein the surface of the disk is substantially flush with a top surface of the body.

28. The computer mouse as recited in claim 20 wherein the plane of rotation of the disk is parallel to a top surface of the body.

29. The computer mouse as recited in claim 20 wherein the disk includes tactile elements for increasing the feel of the disk.

30. The computer mouse as recited in claim 29 wherein the tactile elements are bumps extending from the surface or voids representing removed sections of the surface.

31. The computer mouse as recited in claim 20 wherein the encoder is a mechanical encoder or an optical encoder.

32. The computer mouse as recited in claim 20 wherein the body provides a clicking action for performing an action on a display screen.

33. The computer mouse as recited in claim 32 wherein the clicking action is actuated in a direction normal to the body.

34. The computer mouse as recited in claim 33 further including a base coupled to the body, the base being configured to make moving contact with a surface when the body is moved by the user.

35. The computer mouse as recited in claim 34 wherein the axis is obliquely positioned relative to the base.

36. The computer mouse as recited in claim 20 further including a positional movement detecting mechanism for moving an input pointer on a display screen.

37. The computer mouse as recited in claim 20 further including a button for allowing a user to make a selection on the display.

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