

9. The track pad input device of claim 5, wherein the communication circuit is adapted to transmit the encoded digital values in accordance with a universal serial bus protocol.

10. A track pad input device comprising:

a track pad sensor having a plurality of sensing elements, each sensing element associated with a region of the track pad sensor;

means for measuring a digital value for each of the plurality of sensing elements, the measured digital value representing a characteristic of the sensing element; and

means for transmitting the plurality of measured digital values to a host processor for processing, wherein the host processor is also at least partially responsible for executing user-level tasks.

11. The track pad input device of claim 10, wherein the track pad input device does not include a means for determining a user action corresponding to manipulation of the track pad sensor.

12. The track pad input device of claim 10, wherein the track pad sensor comprises a resistive sensor array.

13. The track pad input device of claim 10, wherein the track pad sensor comprises a capacitive sensor array.

14. The track pad input device of claim 13, wherein the means for measuring comprises:

means for selectively stimulating each of the plurality of sensing elements;

means for determining a time required to stimulate each selected sensing element to a specified event; and

means for encoding the determined time into a digital value.

15. The track pad input device of claim 14, wherein the specified event comprises charging a known capacitance to a specified voltage.

16. The track pad input device of claim 10, wherein the means for transmitting comprises a means for transmitting the measured digital values to the host processor in accordance with a universal serial bus protocol.

17. A track pad input method, comprising:

stimulating a plurality of sensor elements in a track pad sensor;

measuring a characteristic for each of the stimulated sensor elements, each measurement being encoded by a digital value;

transmitting the measured digital values to a host processor wherein the host processor is responsible, at least in part, for executing user-level tasks;

analyzing, with the host processor, the measured digital values; and

generating a signal representing a track pad input action based on the measured digital values.

18. The method of claim 17, wherein the act of stimulating comprises stimulating a capacitive track pad sensor element.

19. The method of claim 18, wherein the act of measuring a characteristic comprises determining a digital value representing a capacitance value.

20. The method of claim 17, wherein the act of transmitting comprises transmitting the measured digital values in accordance with a universal serial bus protocol.

21. The method of claim 17, wherein the act of generating comprises generating a signal encoding a cursor movement action.

22. The method of claim 17, wherein the host processor is one of a plurality of processors associated with a host computer system.

23. The method of claim 22, wherein the act of analyzing is performed by one or more of the plurality of processors.

24. A computer system, comprising:

one or more host processors for executing, at least in part, user-level tasks;

a display unit operatively coupled to the host processor;

a first communication circuit operatively coupled to the host processor; and

a track pad input device comprising

a track pad sensor having a plurality of sensing elements, each sensing element associated with a region of the track pad sensor;

a data acquisition circuit electrically coupled to the track pad sensor for selectively encoding a digital value representing a characteristic for each of the plurality of sensing elements; and

a second communication circuit for transmitting the encoded digital values to the first communication circuit, where after at least one of the one or more host determine an action corresponding to manipulation of the track pad sensor.

25. The computer system of claim 24, wherein the first and second communication circuits are adapted to operate in accordance with a universal serial bus protocol.

26. The computer system of claim 24, wherein the track pad sensor comprises a resistive sensor array.

27. The computer system of claim 24, wherein the track pad sensor comprises a capacitive sensor array.

28. The computer system of claim 27, wherein the data acquisition circuit comprises:

means for selectively stimulating each of the plurality of sensing elements;

means for determining a time required to stimulate each selected sensing element to a specified event; and

means for encoding the determined time into a digital value.

29. The computer system of claim 28, wherein the specified event comprises charging a known capacitance to a specified voltage.

30. The computer system of claim 24, wherein the data acquisition circuit is adapted to repeatedly encode digital values for each of the plurality of sensing elements.

31. The method of claim 17, wherein the act of analyzing comprises determining a single finger is manipulating the track pad sensor.

32. The method of claim 31, wherein the act of generating a signal comprises indicating a single-finger gesture.

33. The method of claim 32, wherein the single-finger gesture comprises a single click action.