cally contacted by a user and movable in a planar workspace, the mouse comprising:

a sensor device coupled to a housing of said mouse, said sensor device detecting said movement of said mouse in said planar workspace and to output sensor signals representative of said movement;

a button coupled to said housing of said mouse and having a degree of freedom and a sensor for detecting a position of said button, such that when said button is pressed by said user to a predetermined position, a command signal is sent to said host computer;

a microprocessor-controlled actuator coupled to said button of said mouse, said actuator operative to apply an output spring force in said degree of freedom of said button; and

a microprocessor local to said force feedback mouse and separate from said host computer and coupled to said sensor device and to said actuator, said microprocessor receiving a command from said host computer that causes said microprocessor to control said actuator to create said spring force in said degree of freedom of said button, said spring force having a magnitude specified by said command.

2. A force feedback mouse as recited in claim **1** wherein a grounded portion of said actuator is coupled to said housing of said mouse and a moving portion of said actuator is coupled to said button.

3. A force feedback mouse as recited in claim **1** wherein said actuator is a linear actuator that applies a linear output force in said degree of freedom of said button.

4. A force feedback mouse as recited in claim **3** wherein said linear actuator is a voice coil actuator.

5. A force feedback mouse as recited in claim **1** wherein said sensor includes a contact switch for detecting a depressed position of said button.

6. A force feedback mouse as recited in claim **1** wherein said sensor detects a range of at least three positions of said button in said degree of freedom of said button.

7. A force feedback mouse as recited in claim **6** wherein said output force is dependent, at least in part, on said position of said button in said degree of freedom.

8. A force feedback mouse as recited in claim **1** wherein said output spring force is correlated with a graphical representation displayed by said host computer, wherein a position of said mouse in said planar workspace corresponds with a position of a cursor displayed in said graphical representation.

9. A force feedback mouse as recited in claim **1** wherein said magnitude of said spring force is dependent on a characteristic of said graphical object with which said cursor interacts.

10. A force feedback mouse as recited in claim **9** wherein said characteristic of said graphical object is a type of said graphical object, wherein said type includes one of an icon, a window, and a menu item.

11. A force feedback mouse as recited in claim **1** wherein said microprocessor is operative to receive said sensor signals from said sensors and report locative data to said host computer derived from said sensor signals and indicative of said movement of said mouse.

12. A force feedback mouse as recited in claim **1** wherein said microprocessor receives low-level force commands from said host computer, said low-level force commands being transmitted to said actuator to be output as forces.

13. A force feedback pointing device coupled to a host computer implementing a host application program, said pointing device physically contacted by a user and movable to provide input to said host computer, the pointing device comprising:

a cylindrical member operative to rotate about an axis and to translate along said axis;

a sensor device coupled to said cylindrical member operative to detect said rotation and said translation of said cylindrical member and to output sensor signals representative of said rotation and said translation, wherein said sensor signals are used by said host computer to control a position of a graphical object in a displayed graphical environment;

a command sensor for detecting a motion of said cylindrical member in a degree of freedom approximately perpendicular to said translation, such that when said cylindrical member is pressed by said user to a predetermined position in said perpendicular degree of freedom, a command signal is sent to said host computer; and

an actuator coupled to said cylindrical member and operative to apply a linear output force in said perpendicular degree of freedom of said cylindrical member, wherein said actuator receives a signal derived from a command sent from said host computer that causes said actuator to create a spring force in said degree of freedom of said cylindrical member, said spring force having a stiffness specified by said command.

14. A force feedback pointing device as recited in claim **13** wherein said actuator is a linear actuator.

15. A force feedback pointing device as recited in claim **14** further comprising a microprocessor local to said force feedback pointing device and separate from said host computer and coupled to said sensor device and to said actuator, said microprocessor receiving said command from said host computer that causes said microprocessor to control said actuator to create said spring force in said degree of freedom of said cylindrical member.

16. A force feedback pointing device as recited in claim **13** wherein said axis of said cylindrical member is approximately parallel to a horizontal plane, and wherein said rotation of said cylindrical member controls a vertical position and said translation of said cylindrical member controls a horizontal position of said graphical object in said graphical environment, said graphical object being a cursor.

17. A force feedback pointing device as recited in claim **13** wherein said command sensor is a contact switch.

18. A force feedback pointing device as recited in claim **13** wherein said command sensor is a continuous range sensor.

19. A force feedback pointing device as recited in claim **13** wherein said output force is correlated with an interaction of said cursor with a different graphical object in said graphical environment.

20. A force feedback pointing device as recited in claim **19** wherein said output force is a jolt or vibration force sensation.

21. A method for providing force feedback in a mouse input device coupled to a host computer, the method comprising:

outputting sensor signals to said host computer, said sensor signals representing a position of said mouse device in a planar workspace;

outputting a button signal to said host computer in response to a button on said mouse being moved by a user in a degree of freedom of said button; and

outputting a jolt on said button in said degree of freedom of said button based on a host command sent to said mouse device from said host computer, said jolt correlated with the interaction of a user-controlled cursor