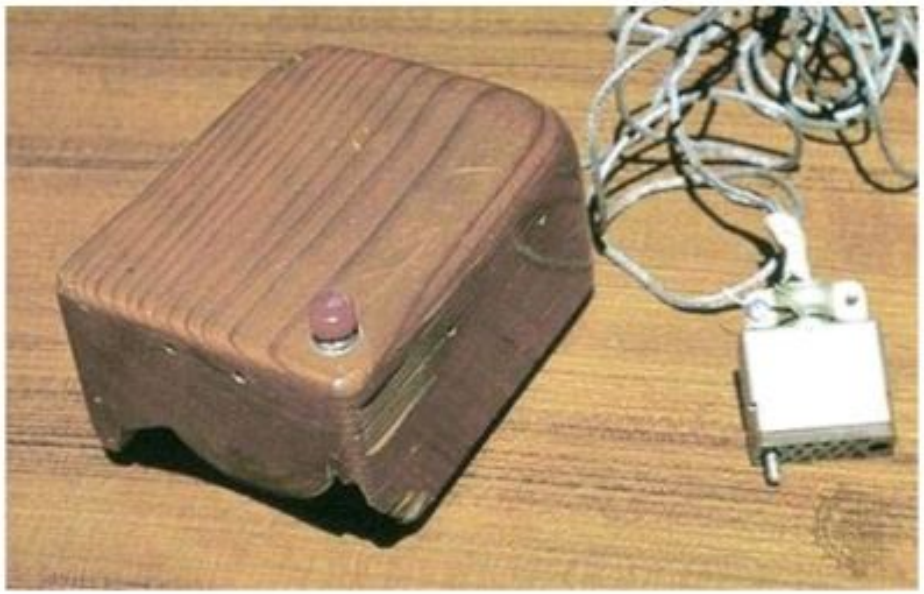
MOUSE

Introduction

- A hand-operated electronic device that controls the coordinates of a cursor on your computer screen as you move it around on a pad.
- On the bottom of the device is a ball that rolls on the surface of the pad.
- A mouse takes much more room than a trackball.

Inventor of Computer Mouse

- In 1968, a man named Douglas Engelbart created this special tool to help people control their computers.
- It was a small wooden block on wheels, and there was a long cable sticking out of the back, kind of like a tail.



How to Hold the Mouse?

- Hold the mouse gently with your index finger resting on the primary button and your thumb resting on the side.
- To move the mouse, slide it slowly in any direction.
- If you run out of room to move your mouse on your desk or mouse pad, just pick up the mouse and bring it back closer to you.

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A Windows Mouse: How to Use?

- A typical Windows mouse has two or more buttons. Some Windows mice have a center scroll wheel which lets you quickly scroll through documents, menus, etc.
- **To use a mouse you must be able to:**
  - **click** - click once with the left mouse button. Any time a click is mentioned it means click once with the left mouse button.
  - **double-click** - click twice with the left mouse button.
  - **right-click** - click once with the right mouse button.
  - **click and drag** - hold down the left mouse button and move the mouse on the mouse pad. Click and drag is used to move, copy, and resize.
  - **right-click and drag** - hold down the right mouse button and move the mouse on the mouse pad.

Pointing, Clicking & Dragging

- Double-clicking: Point to the item on the screen, and click twice quickly.

- This type of clicking is most often used to open items on your desktop. (eg. Open a program).

Scroll Wheel

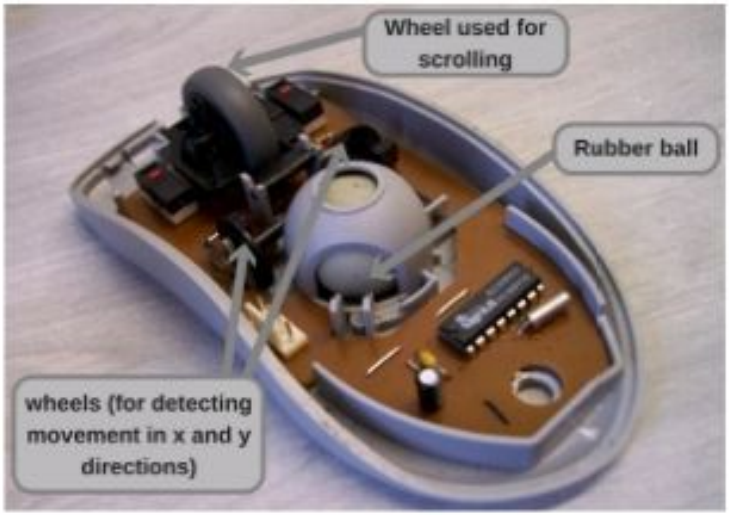
- If your mouse has a scroll wheel, you can use it to scroll through documents and pages on the web.
- To scroll down, roll the wheel toward you.
- To scroll up, roll the wheel away from you.

Types of Mouse

- Mechanical Mouse
- Optical and Laser Mouse
- Inertial and gyroscopic mice
- 3D Mouse
- Tactile mouse

Mechanical Mouse

- German company Telefunken published on their early ball mouse, called "Rollkugel“ (German for "rolling ball"), on 2 October 1968.
- The ball mouse replaced the external wheels with a single ball that could rotate in any direction.
- Perpendicular chopper wheels housed inside the mouse's body chopped beams of light on the way to light sensors, thus detecting in their turn the motion of the ball.



Optical and Laser Mouse

- Optical mouse make use of one or more light-emitting diodes (LEDs) and an imaging array of photodiodes to detect movement relative to the underlying surface.

- Laser mouse is an optical mouse that uses laser light.

Inertial and Gyroscopic Mice

- Often called "air mouse" since they do not require a surface to operate.
- Inertial mouse use a tuning fork or other accelerometer to detect rotary movement for every axis supported.
- The most common models (manufactured by Logitech and Gyration) work using 2 degrees of rotational freedom and are insensitive to spatial translation.

3D Mouse

- Also known as bats, flying mouse, or stick.
- Generally function through ultrasound and provide at least three degrees of freedom.
- A recent consumer 3D pointing device is the Wii Remote, also known colloquially as the Wiimote.

Tactile Mouse

- For the purpose of providing access for blind people to graphical information on the computer screen, a device called **"tactile mouse"** has been developed.
- It consists of an ordinary computer mouse with a small tactile display unit on its top.
- By adequately adjusting the ratio of hand movement to pins, subjects in the experiment were able to distinguish geometric figures; triangles, squares, pentagons, hexagons, and circles.