



COMPUTER SYSTEMS & PROGRAMMING

Computer Mouse

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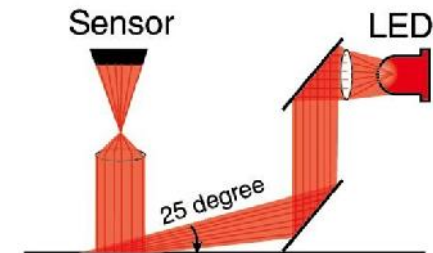
Introduction

- Computer mouse was first introduced by Apple Macintosh in 1984
- It was named XYIndexer
- Computer Mouse usually contains
 - Left & Right buttons
 - Scroll Wheel
 - Scroll button
- Types
 - Mechanical
 - Optical
 - LED
 - Laser
 - Track-pad/Touchpad
 - Track ball
 - Many more



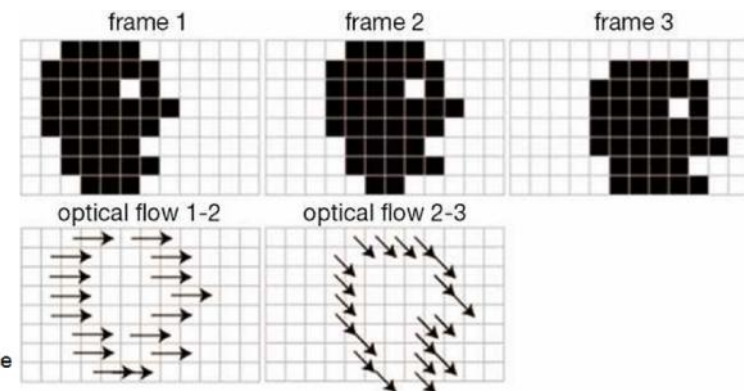
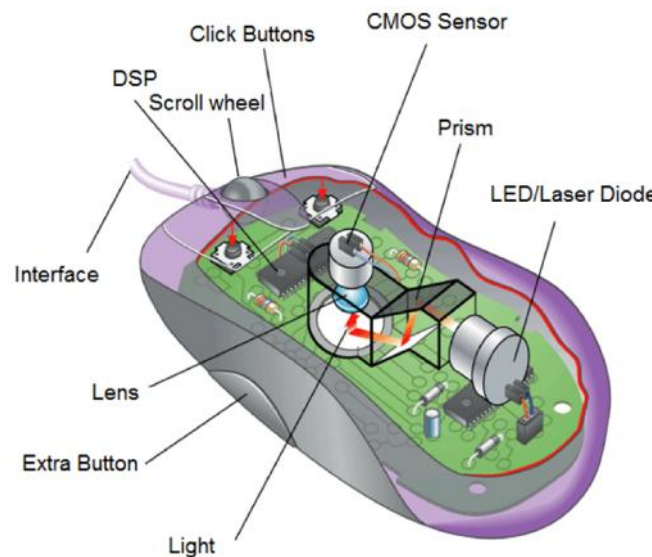
Optical Mouse

- Optical mouse was introduced 1999 by Microsoft with help of HP
- Based on optical phenomenon
- Light is emitted on 25° towards surface
- Sensor sense the highlighted areas of surface
- XY coordinates are computed from current and previous sensed



- Components

- DSP
- CMOS sensor
- LED/Laser
- Lens
- Prism
- Push Buttons
- Scroll wheel
- Interface





Optical Mouse

- Interfaces
 - Wired
 - PS/2 port
 - Serial port
 - USB port
 - Wireless
 - Infrared
 - RF
 - Bluetooth
- Advantages
 - No moving parts so lower chance of failure
 - No interfere with the tracking sensors from environment
 - Smoother response.
 - Doesn't require a special surface



Trackpad

- Also known as touchpad
- Introduced in 1988 and commercialized by Apple Macintosh in 1994
- Tracks the motion of finger on trackpad
- XY coordinates are computed from difference in sensed locations
- Trackpad's layer(s) is/are divided into grids for x and y axis
- Two technologies
 - Conductive
 - Uses two conductive layers separated by thin insulation layer
 - Insulation layer contains holes at intersection of layers
 - Pressure makes contact between two conductive layers
 - Capacitive
 - Single charged layer is used
 - Human contact provide complete circuit and location is sensed
 - Provides smoother interaction with system
- Trackpad are normally part of laptop computers are connected with ribbon cable with motherboard



Questions

