Comp 388 / Comp 422
Windows Mobile Graphics

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Introduction

• User interaction in Windows Mobile
  • Display Screen (output)
  • Hardware Buttons (input)
  • POCKET PC ONLY: Stylus and Touch Sensitive Screen (input)
• Interaction closely coupled to a Window / Form
  • A "virtual console"
  • Often one only on the screen
• GUI is "Event Driven"

The Mouse -
Still there in WM

• Mouse
  – Tap of stylus – think of it as a mouse
  – Can "drag"
• Keyboard
  – Hardware keyboard (including arrow keys)
  – Joy stick like things
  – SIP in all the options
• "Mouse" and "Keyboard" used as common terms for these ways to provide input
Graphics Concepts

- **Graphics work with**
  - Display screen / window / form
  - Bitmaps (for later display on a window)
- **Key class**
  - System.Drawing.Graphics
  - All actual drawing methods here
    - DrawString
- **Types of graphics**
  - Text
  - Raster – icons, bitmap images, fill colors
    - Operate on an array of pixels
  - Vector – line, rectangle, ellipse, ...

How?

- **Drawing done with a Graphics object**
  - Typically draw in a Control – use it to access graphics object(s)
  - Paint events provide a graphics object when sent to a control
    - Centralize all drawing for a window
  - Non Paint drawing events (real time interaction)
- **Typically DO NOT hold a reference to a graphics object beyond the event end**

How? continued

- **Keyboard events**
  - KeyDown, KeyPress, KeyUp events
- **Stylus events**
  - MouseDown, MouseMove, Click, MouseUp
- **Often allow controls to handle these events**
Explore the Smartphone UI

- Use the WM Emulator
- With a partner next to you try out as many applications as you wish.
  - Option find a game to download
- Answer these questions in BB discussion topic:
  - Compared to desktop, what are the key differences working with the SP GUI?
  - What single thing is hardest or most troublesome to do on the SP GUI?