



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?


