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Conventional visual UIs: GUIs, DM & WIMPs

Basic terms and abbreviation overload

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From UIs to GUIs. What's similar in these?

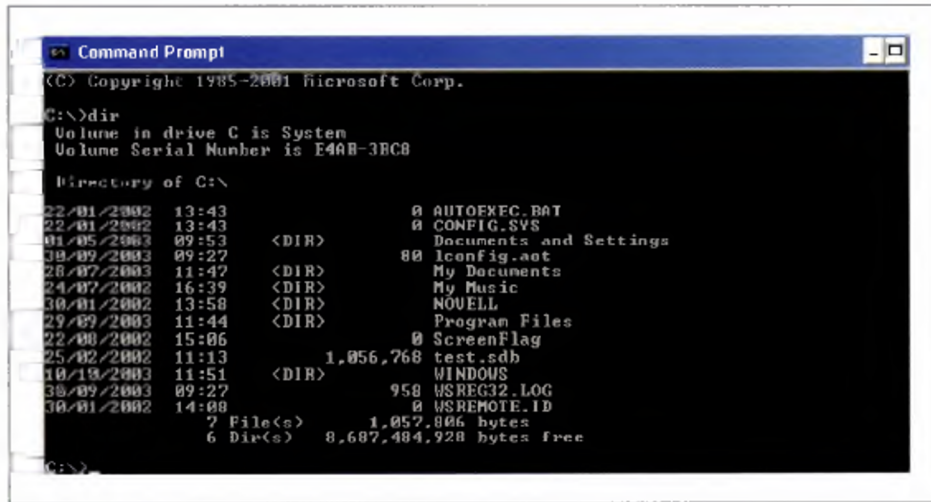


Figure 12.1 The enigmatic c:\> prompt in MSDOS

Source: Benyon, pg. 257



Source: Wikipedia (CC)



From UIs to GUIs

- “Old fashioned computer UIs” → command languages
 - Recall command and input it
 - Disadvantages: Requires the user to have a mental model, actions less reversible
 - Advantages: Efficient
- GUIs Graphical User Interfaces
 - Displays objects that can be *directly manipulated*
 - Disadvantages: Slow for repetitive actions
 - Advantages: Arguably more learnable, actions recognizable, reversible actions

Who still uses terminal/CMD?



GUIs and Direct Manipulation

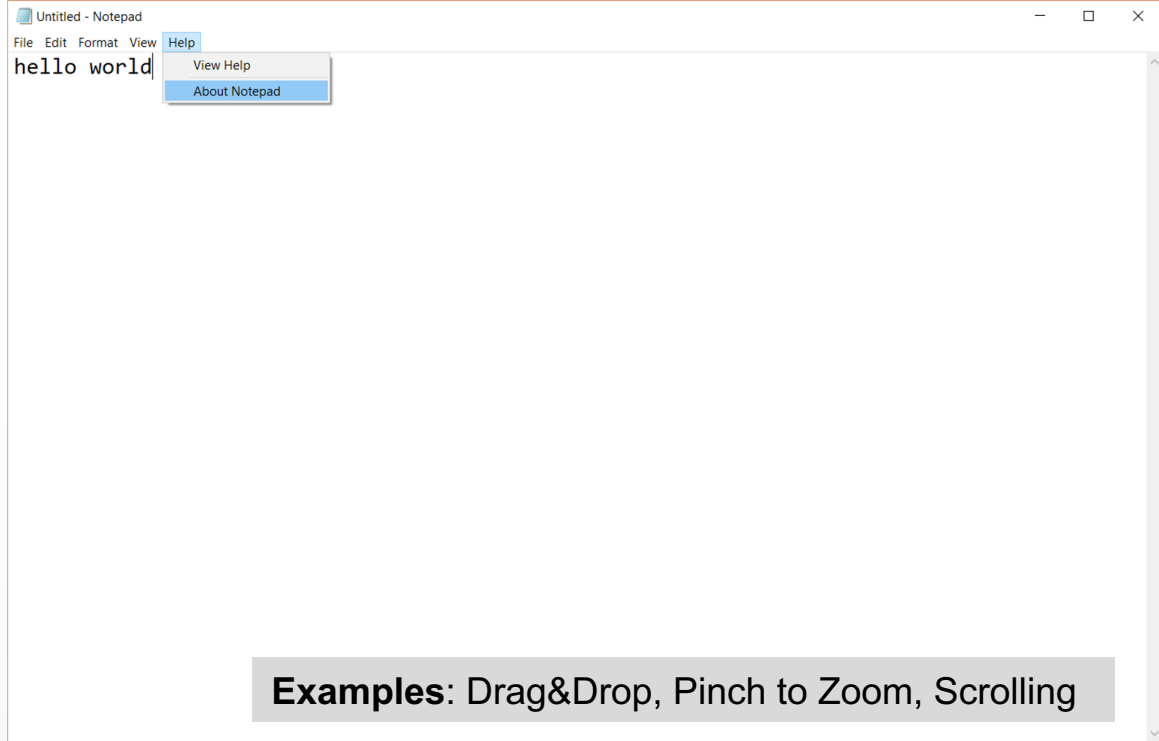
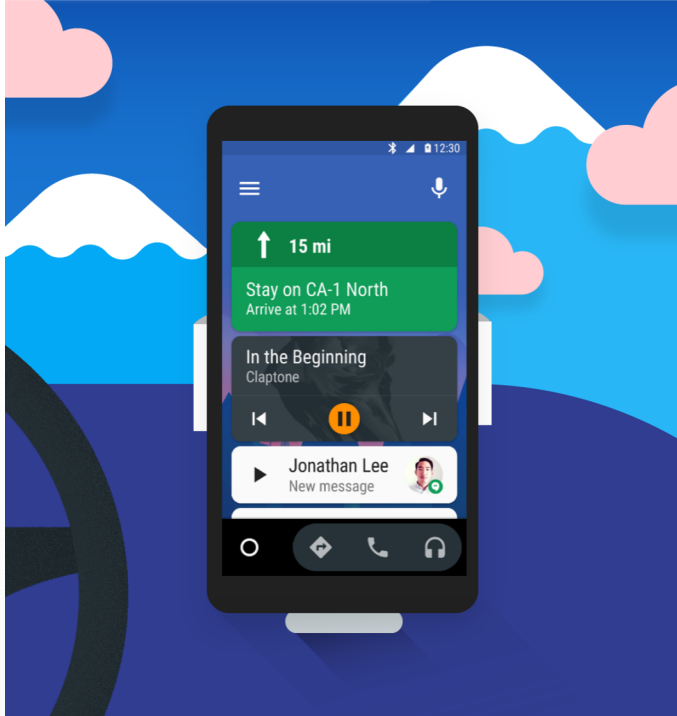
Definition

1. Displays representation of an object of interest
2. Physical actions or labeled button presses
3. Rapid incremental reversible operations

Objects in the user interface are visible and can be affected by physical, reversible, incremental actions that receive immediate feedback.



Direct Manipulation (DM), examples





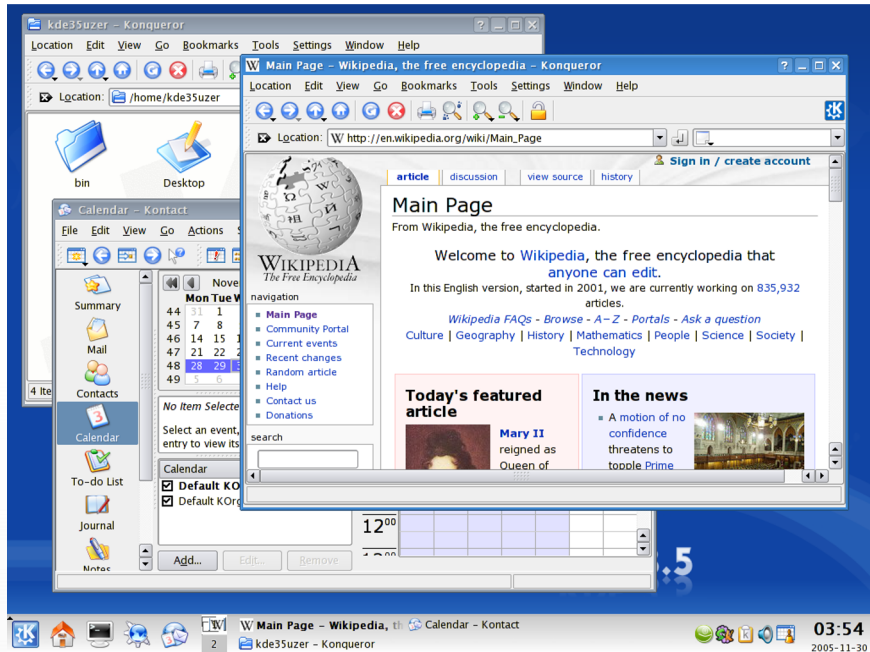
WIMPs: Windows, Icons, Menus, Pointers

- Window: Sharing graphical display resources among multiple applications
- Icon: Image or symbol used to represent a file, folder, application, or device Object
- Menu: List of commands or options
- Pointing device: Mouse, finger, stylus

Developed at Xerox in 1975



WIMP^s: Windows and Icons



Source: Wikipedia (CC)



Figure 12.5 Examples of commonly used icons

Source: Benyon, pg. 260



WIMPs: Menus and Pointers

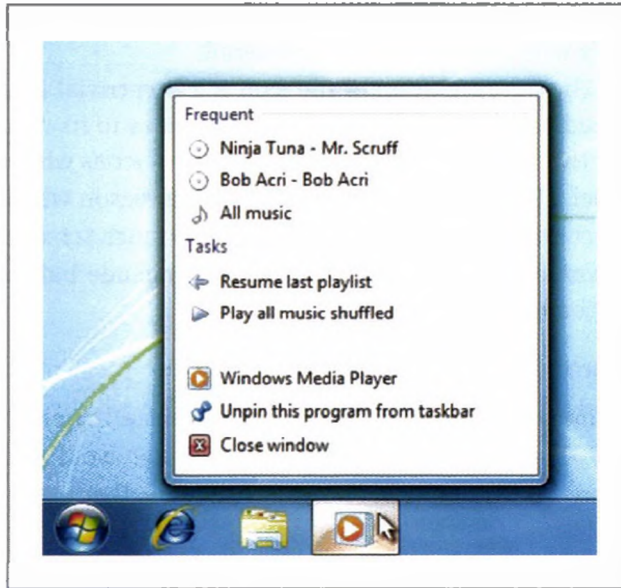
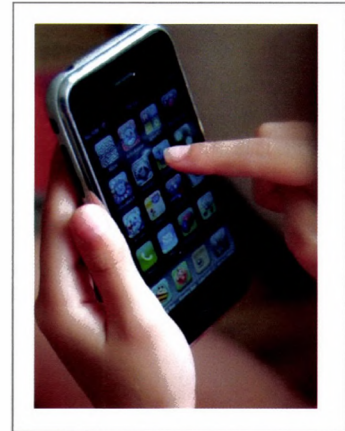


Figure 12.8 The jump bar menu from Windows 8

Source: Benyon, pg. 262



Source: Wikipedia (CC)



Source: Benyon, pg. 6



WIMP: What about the future?

- Just to name a few
- Augmented reality
 - Virtual reality
 - Haptic interfaces
 - Gesture interfaces
 - Brain-computer interfaces



HYPER-REALITY by K. Matsuda. See the first 30 seconds and then 2:00 to 2:30.

<https://www.youtube.com/watch?v=YJg02ivYzSs>



In upcoming lectures

- Available soon: Usability and user experience (what makes using interfaces good or less good?)
- After that: Design processes and techniques (HCD)
- Far future: Interface design (material design) + front-end technologies (flutter)
- Even farther: Evaluating interfaces (usability evaluation)

Human-centred design

Conventional UIs have design patterns and principles for different contexts (web, mobile, speech, etc.). We'll talk more about them when we have covered the basics of design processes and get to implementing UIs



Warm-up assignment: Bad user interfaces

Find bad user interfaces online and:

1. Think why they are bad.
2. Post them in the course forum thread called “Bad interface examples” as replies.

Moodle

You can start by looking at social media forums such as

<https://www.reddit.com/r/badwebdesign/>

<https://www.reddit.com/r/softwaregore/>

We'll look at the thread at the start of next exercises.



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