

MyGOSSCon 2011

A large Variety of Free and Open Source
Desktops for Current and Future Needs,
Including Tablets

Uwe Dippel
Senior Lecturer
Department for Systems and Networking
College of Information Technology
University Tenaga Nasional
udippel@uniten.edu.my

Desktop == Interface

- A PC Interface for the last generation(s) was basically an interface of
 - **two inputs:** keyboard and mouse
 - **one output:** monitor
 - Additionally, sound was sometimes used for output as well as input
- The interface was essentially ubiquitous and of constant hardware properties ("inches of screen diagonal")

Input Device: Keyboard

- 'Keyboard' of a typewriter, with some additions for specific computer use



Output Device: Monitor

- Typewriter: line-oriented output
(current line is written, lines above are invariable, lines below are un-done)
 - line-based editing
- Monitor: screen-oriented output
(all lines are visible – if done; and technically, any line can be altered)
 - screen-based editing

Command Line Interface - I

```

----- INTERNET -----
Your Internet ID: monopoly@host.yab.com

Getting Files                                Finding Information
[A] Find Files on the Net (Archie)           [G] Search for Information (Gopher)
[F] Get Files from the Net (FTP)            [W] Hypertext Search (WWW)
[Y] File Transfers for Net Account          [Q] Query About Someone (Finger)
      Entertainment                          Messages
[M] MUDs (Games)                            [E] Internet E-Mail
[I] Internet Teleconference (IRC)           [U] Internet Message Areas (Usenet)
[J] Tintin Interface for MUDs              Help
      Miscellaneous                          [D] Detailed Reference Text
[B] Unix Shell Access (BASH)                [H] Help Using Internet Functions
[T] Connect to Other Sites (Telnet)         [K] If You're Stuck at "Password"
      SLIP Access (Mosaic, NetScape, etc)
[S] SLIP - Graphical Interface              [C] How To Configure SLIP Access
[P] PPP - Point-to-Point Protocol

Your Choice (A,B,C,D,E,F,G,H,I,J,K,M,P,Q,S,T,U,W,Y or X)? :
(N)onstop, (Q)uit, or (C)ontinue?
Menu: <Ctrl R-Shift>                2400 8N1                VT100                Online
```


Pointing Device

- A plethora of pointing devices were invented to handle the 2-dimensional access mode: mouse, trackball, foot-operated mouse, joystick, trackpad, and so forth



Paradigm ...

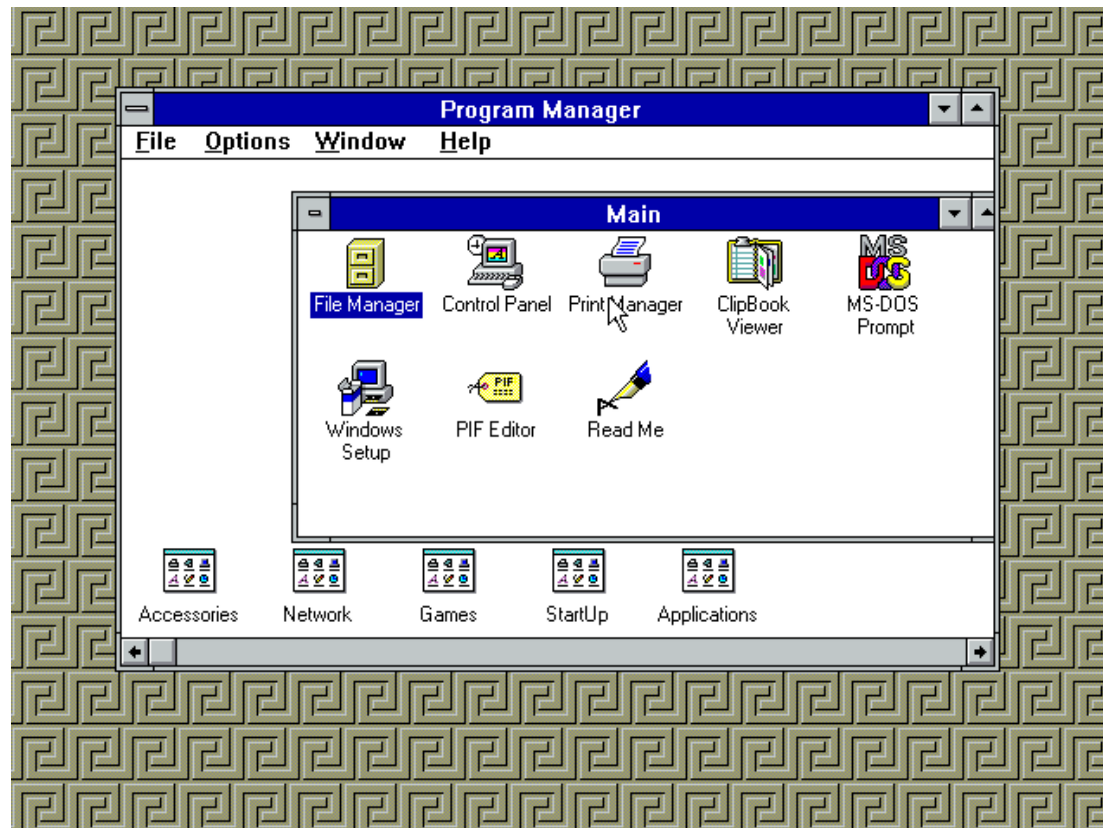
Keyboard

Mouse



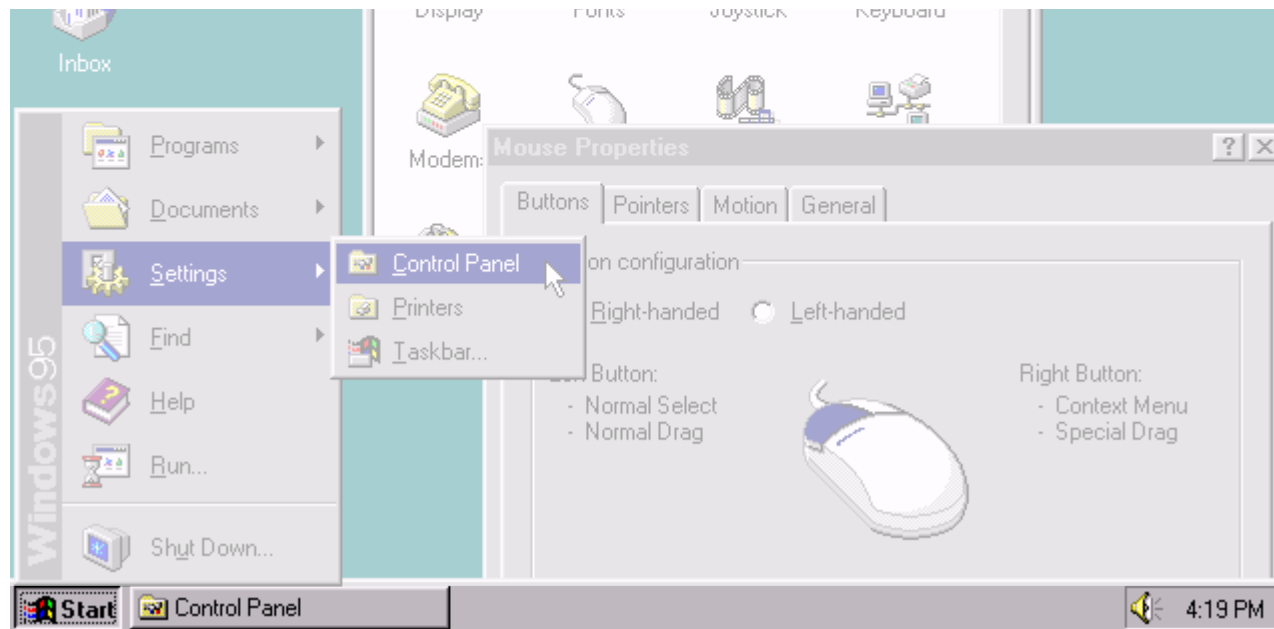
Consequence: (G)UI - I

- The beginning: A Program Manager



Consequence: (G)UI - II

- The new paradigm: The *Panel*



Standardised Workplace



New (old) kids in town ...

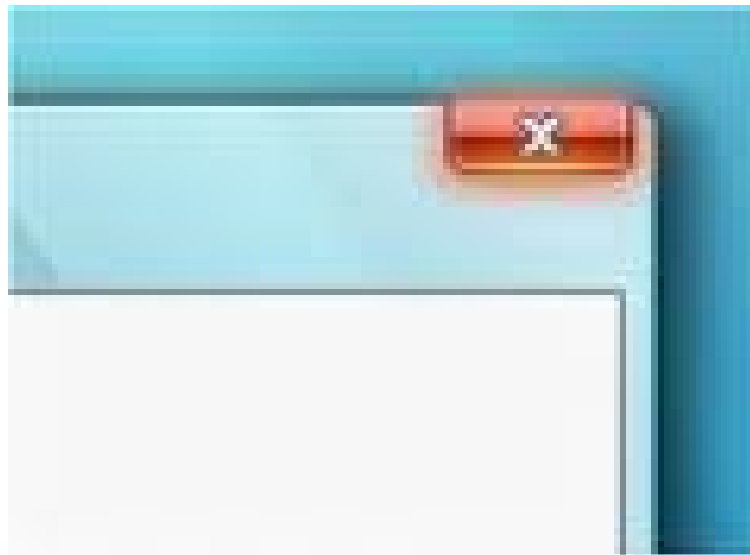
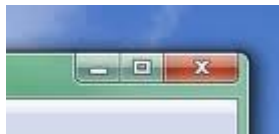


New (old) kids in town ...



... Until

Try touching the close window button on your browser with your finger tip without touching the other buttons next to it.



~~Paradigm~~

- Resolution of an early mouse: 300 dpi
- Resolution of a modern mouse: 1200 dpi
- Resolution of an average finger: 40 dpi
- A mouse pointer has a clear tip
- A mouse pointer can be transparent
- A mouse is a binary click
- A finger can manipulate: press, rotate, stretch (with two fingers)
- A finger has no right click
- A finger can easily do a gesture

Pros and Cons

- INTERACTION: natural
- ROTATION: rotate finger(s)
- SCALING: zoom in and out
- SELECTION: thumbing / accelerating
- PORTABLE: no additional surface needed
- PRESSURE: sensitive
- MULTI-POINT: possible

Pros and Cons

- IMPRECISION: imprecise pointing device
- OBSTRUCTION: fingers block sight
- INEFFICIENCY: switching between mouse and keyboard cumbersome
- SMUDGINESS: touching monitors is dirty
- HOVER-EVENTS: do not exist
- RIGHT-CLICK: does not exist
- ACROSS-THE-SCREEN: must be physical

... Hand-ling / Finger-ing ...



Alternatives

- Multiple Screens
- Multiple Desktops
- Thumbing
- Edge Events
- Display-Only Panels
- Hidden Content (Menus)
- Hierarchical Navigation
- Alternative Navigation

It all started with the netbooks

- ubuntu netbook remix → '*Unity*'
- kubuntu netbook edition
- GNOME 3

... and of course with Android, MeeGo, WebOS, and other not so *Free Software*

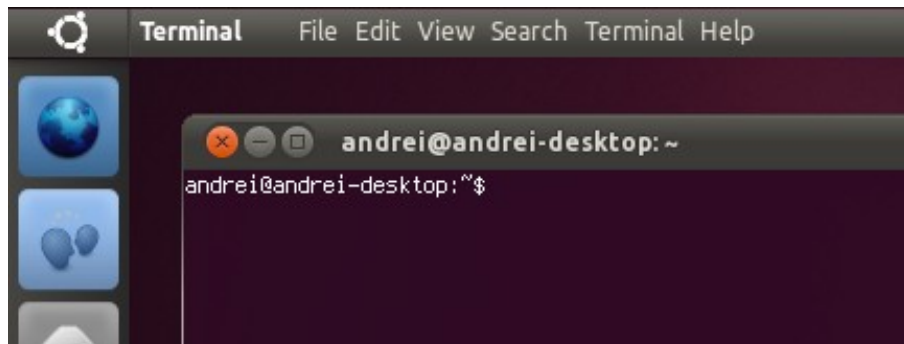
... not to mention the totally un-free iOS running the iPad-s

Unity



Ubuntu netbook-remix

- left auto-hide launchers
- panel beginning to be 'information only'
- extra button for further navigation



- extended search for navigation
- focused menus in the panel (global menu)

Plasma



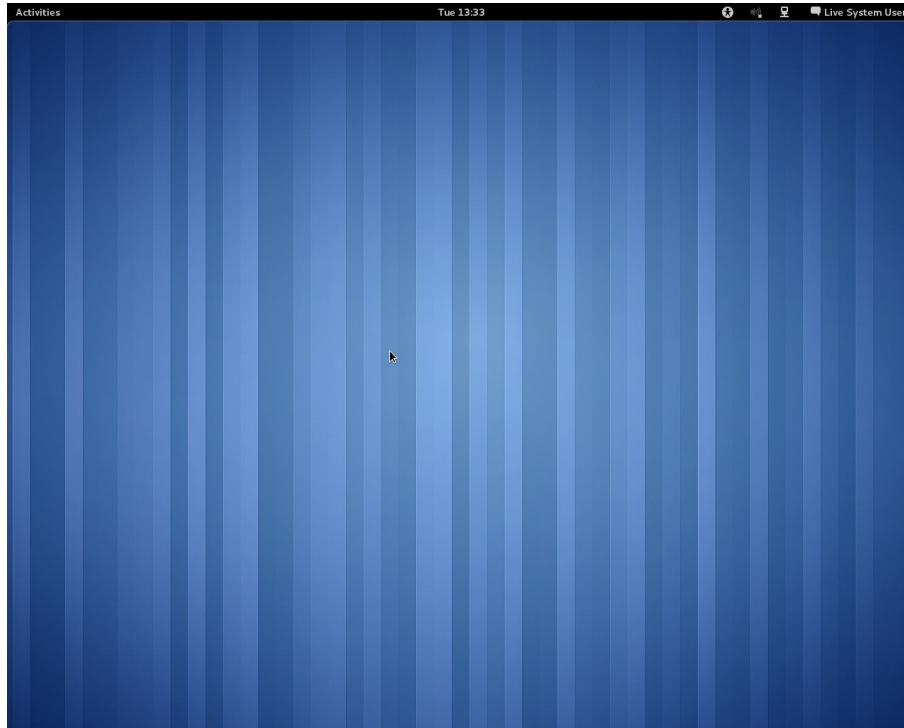
Kubuntu netbook edition

- quick-start launchers
- menu categories
- 'containments' and 'activities'
- conventional panel (alternative navigation)
- extensible *'toolkits'*
- large areas for selection



GNOME 3

Fedora 15, Ubuntu 11.10



- most unconventional
- display-only panel (almost)
- no 'Start'
- everything is handled with 'Activities' button

Incomplete ...

- All these unifying efforts (*Unity*) remain incomplete:
 - configuration
 - spin-controls
 - radio-buttons
- There are effectively *two worlds*:
 - PC / Mac
 - smart-phones
 - tablets

The next paradigm is forming

- What will it be:
 - unified user-interface?
 - two sets of interfaces:
 - touch-enabled
 - pointer-device enabled

Example: Double-World



Questions

?