

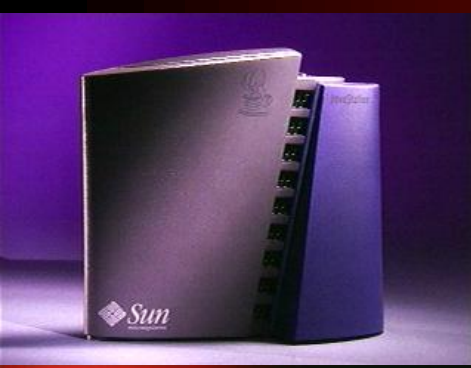
# Supporting Desktop Environments: Are All Operating Systems Equal? Thin Clients

Chad J. Kainz  
Director, Instructional Technology  
Networking Services & Information Technologies  
The University of Chicago

[c-kainz@uchicago.edu](mailto:c-kainz@uchicago.edu)

# Defining Characteristics

- Multiple Operating Environments including Windows NT, Linux, Unix, JavaOS, etc.
- Server-dependent
- Network-dependent
- Physically small
- Little, if any, moving parts
- Throw-away technology



# Particulars: Application Areas

- Largely depends on operating environment
  - Resource-hungry applications (Microsoft Office) can be a problem for both application performance and network traffic
  - JavaOS does have its limitations
- Graphics-intensive applications can be troublesome

# Particulars: Hardware

- Physically small and easy to deploy
- Requires a hefty server
  - ~64 MB RAM/thin client (?)
  - Significant processor load (?)
  - Fast I/O
- Usually needs a switched network
- Finally, thin clients generally require DHCP

# Particulars: Price

- Thin client hardware is inexpensive
- Real cost is in the server
  - Physical configuration costs
    - Building in fault-tolerance
    - Designing “enough” server to handle the load
  - Networking issues
  - Server administration

# Particulars: Ease of Use

- Can be as simple as a web browser or as complex as \_\_\_\_\_
- There's very little that can go wrong from the user perspective - either it works or it doesn't

# Particulars: Administration

- Most everything is done at the server
- Tools for current thin clients are relatively young and it shows
- Largely depends on if the vendor is interested in making thin clients work

# Particulars: Co-existence, Interoperability & Integration

- Again, depends largely on the operating environment
- Common authentication? We'll see...
- Can raise some significant network performance issues
- Removable media is a challenge



# Why Bother?

- Can fill niches where desktops are either too expensive or impossible to maintain
- Can work in areas where commonality is more important than customization
- Examples
  - High risk locations, media classrooms, kiosks, dorm rooms, selected offices, etc.

