

# Microsoft Internet Directions

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Microsoft  
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# The Internet - Why Does It Matter?

- ◆ Important paradigms introduced by Web:
  - User: pages/hyperlinks
  - Developers: “Interactive pages”
    - A new way of doing client-server apps
- ◆ They solve real problems
- ◆ Competitors are leading us in exploiting them:
  - Netscape: majority browser share
  - Java: mindshare<sub>Confidential</sub>

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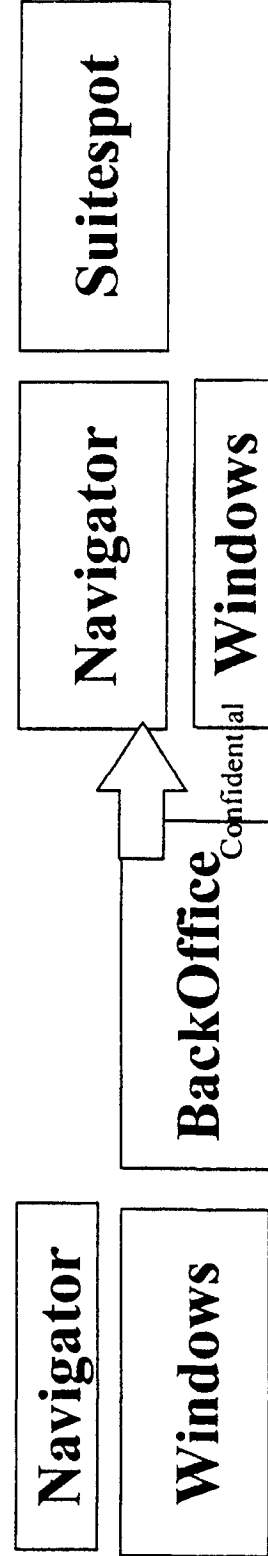
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# Netscape

- ◆ The first “middleware” layer to have end-user momentum
  - “Our goal is to reduce Windows to a partially debugged set of device drivers” Marc Andreessen
- ◆ Focused on client and server:
  - Navigator = Windows
  - Suitespot = BackOffice
- ◆ See near term revenue in the “Intranet”

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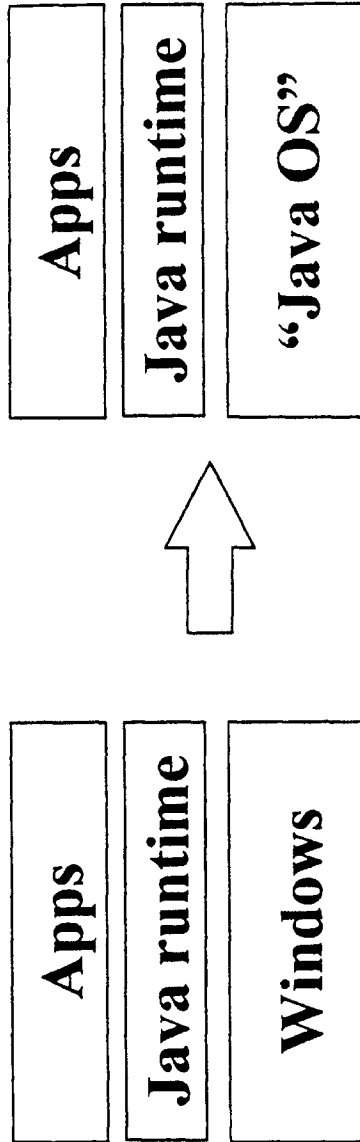
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# Java

- ◆ Sun's goal is:
  - Java class library/runtime = new OS API
  - leverage this new API to replace Windows by JavaOS



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# The "Network Computer"

- ◆ World hunger:
  - Corporations are fed up with cost of ownership of PCs
- ◆ The cure:
  - A "\$500 network computer"
- ◆ The reality:
  - Functionality very limited
  - No application base
  - X-terminals all over again
- ◆ But the hunger is real!
  - Giving Sun, Oracle, IBM a new respectability
  - Customers are listening

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# The Internet/Intranet: Our Strategy

- 1. Win and retain Browser Share - current shares: IE 5-10%, Netscape ~40%, AOL ~25%**
- 2. Offer users, developers, business a better synthesis: “best of PC, best of Web”**
- 3. Own the Intranet with Office, Windows, BackOffice**
- 4. Evangelize Webmasters to utilize our extensions and technology**
- 5. Win Network Operator/ISP (“Internet Service Provider”) client and server design wins**

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# Win And Retain Browser Share - Embrace And Extend

- ◆ Implement all important Netscape features (IE3.0)
- ◆ Offer new differentiated features (ActiveX on IE3.0) on Windows and Mac
- ◆ Integrate with Windows (Nashville)
- ◆ Bootstrap share via Network Operators - eg. AOL
- ◆ Evangelize content providers and developers to exploit features
- ◆ FREE

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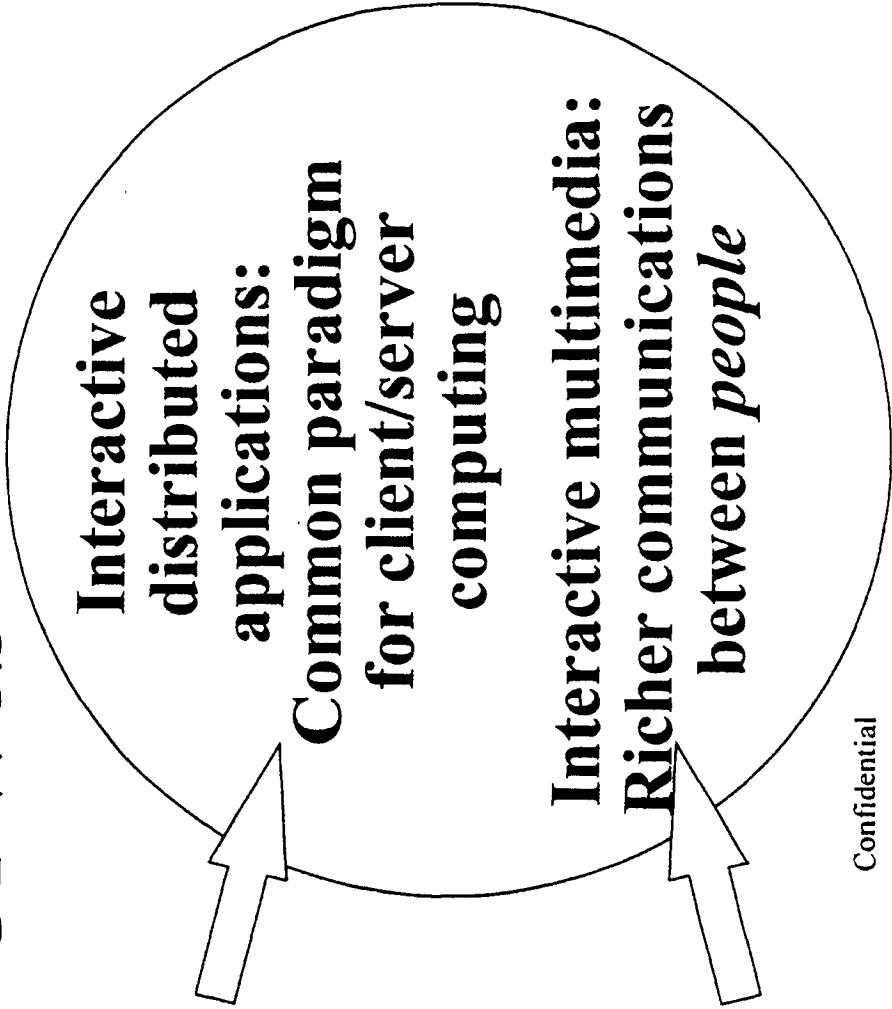
# Synthesis - Best Of PC, Best Of Web

**The PC  
revolution:**

Standalone apps

**The Internet  
revolution:**

Static pages



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## ◆ **A Better Synthesis For: Developer:**

- ActiveX - common way to develop client/server apps for PC LAN and Internet worlds
- Full set of tools

## ◆ **User:**

- Integrated paradigm and tool for finding and viewing information: local, LAN, online

## ◆ **Business:**

- Common, upward compatible infrastructure for LAN, "Intranet", Internet

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# Developer View: ActiveX

Client Applications

ActiveX  
Client OS (Win, Mac...)

Server Applications

ActiveX  
Server OS (Win NT...)

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- ◆ Works for Internet and PC apps
- ◆ Leverage existing investment
- ◆ Open, extensible
- ◆ Cross-platform (Win, Mac, etc.)
- ◆ Language neutral (C++, VB, Java, etc.)

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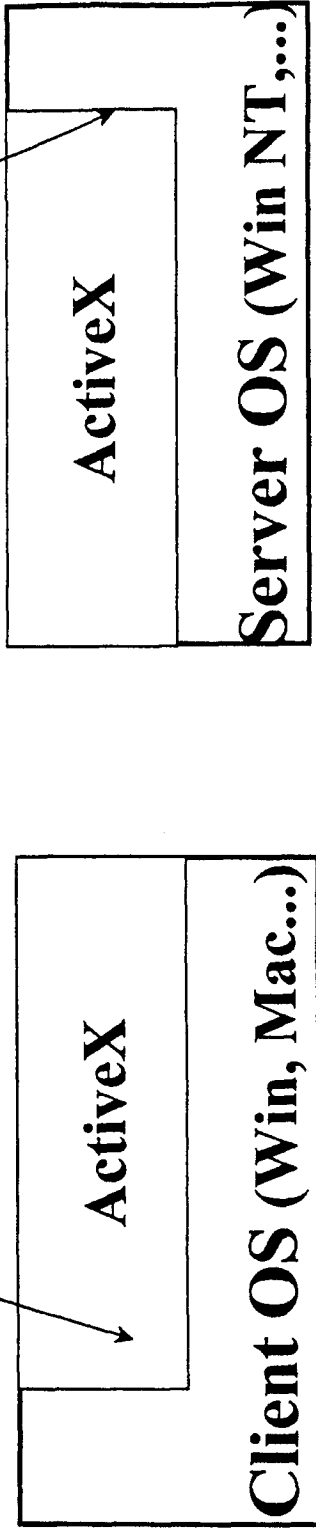
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# ActiveX open architecture

Client-server application services  
S/W components ("controls")

Scripting  
Multimedia services



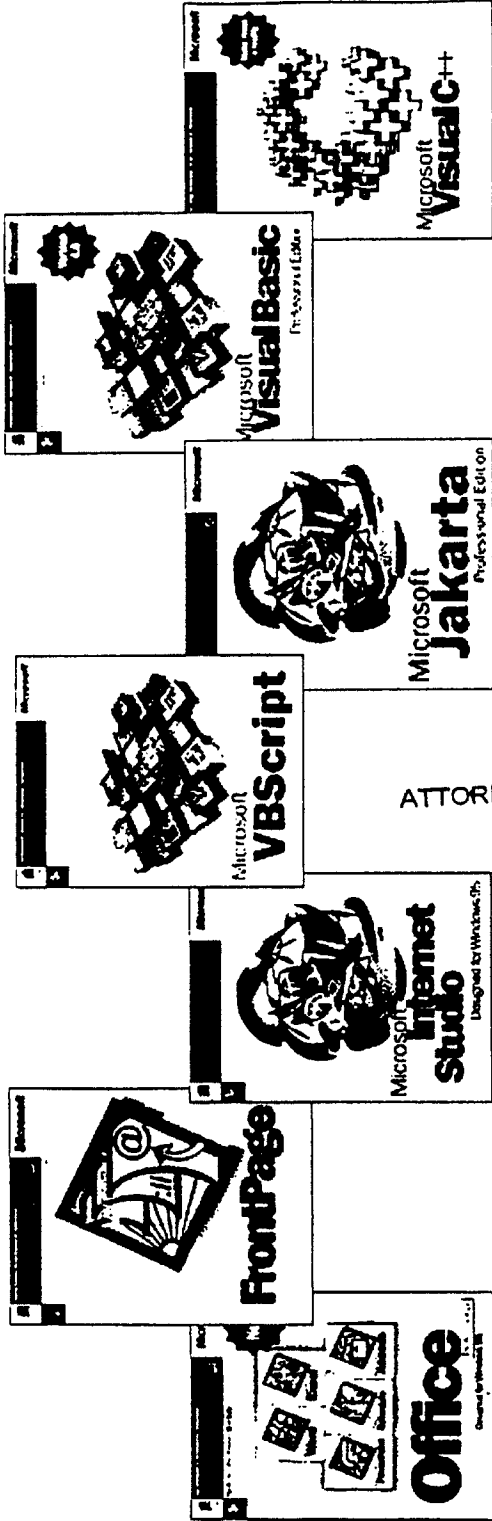
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Real-time Networking: TCP, RTP, RSVP, etc.  
Security: IETF secure transport, SET secure transactions  
Safety: Digital code signing

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# Tools Family



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Less coding, more  
like a "document"

More coding, more  
like an "application"

Windows and ActiveX technologies

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# What About Java?

- ◆ **Remove Java as confrontational issue**
- ◆ **Make Java part of ActiveX:**
  - **MS license from Sun**
  - **MS extensions to Java implementation for IE and Windows**
  - **Java applets appear automatically as ActiveX controls and vice versa**
  - **Encourage Java applet writers to make full use of Windows**

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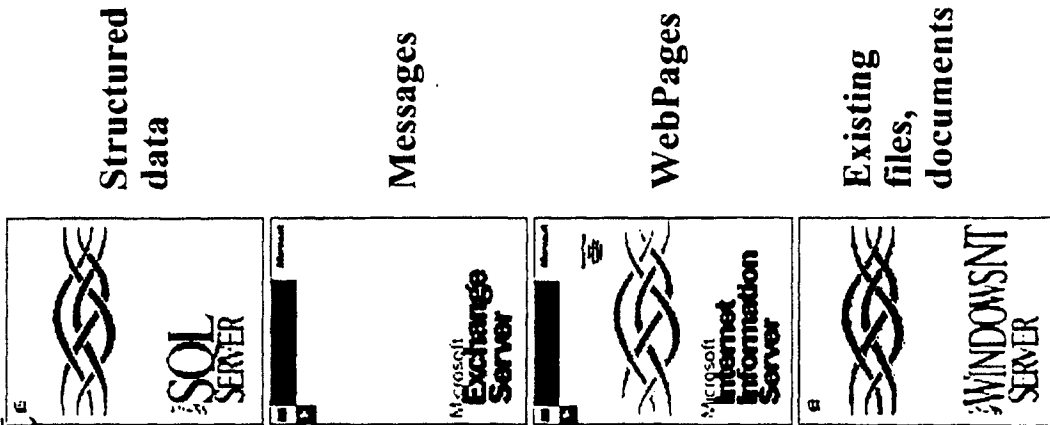
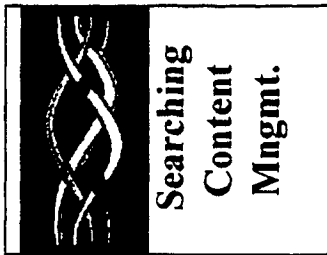
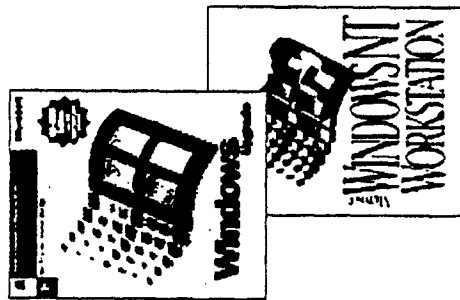
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# Embracing And Extending For User And Business: The Intranet<sup>®</sup>

## Windows:

Integrated Explorer, one tool for viewing information



- ◆ Integrated platform
  - Administration
  - Security
  - Scalable
  - Complete
  - Extensible<sup>®</sup>

## Microsoft BackOffice:

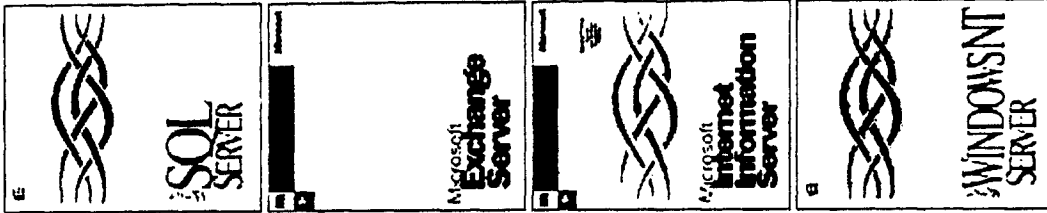
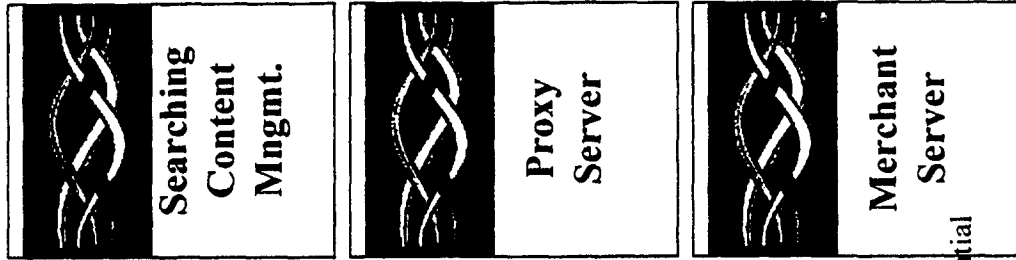
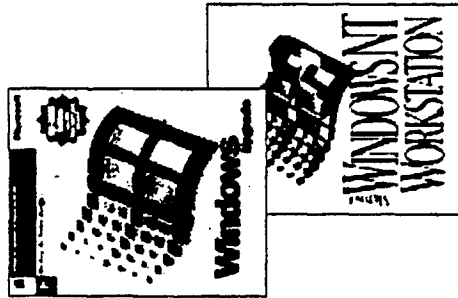
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# Extending Out To The World:

## Integrated Client



Structured data

Messages

WebPages

Existing files, documents

## Integrated Services

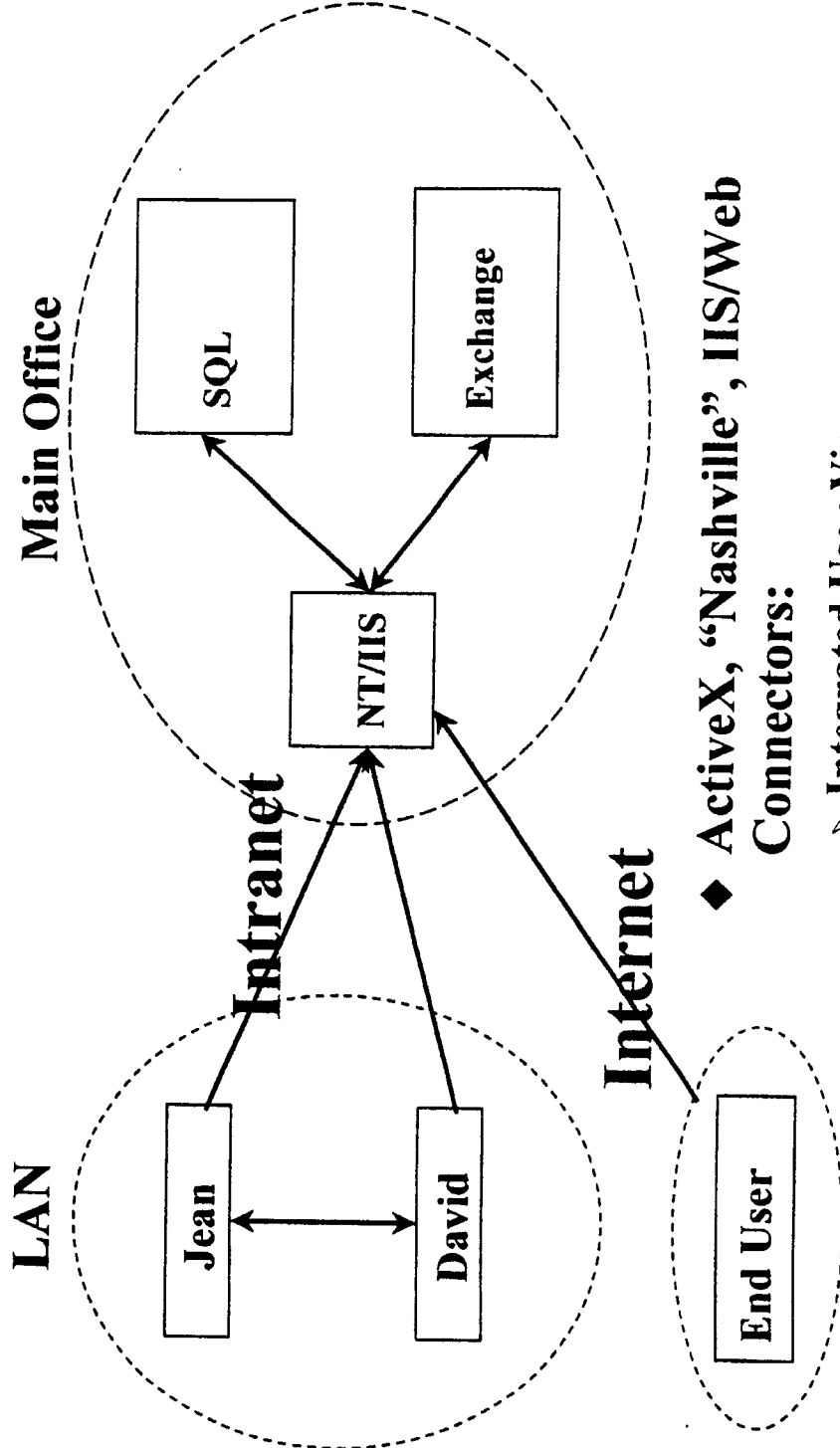
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# Demonstration: "Windemere Real Estate"



◆ ActiveX, "Nashville", IIS/Web Connectors:

- Integrated User View
- Integrated Infrastructure for Business



# Standards And Partnership Announcements

- ◆ Internet client s/w: America Online
- ◆ Working with IETF, W3C on:
  - Security, HTML extensions, parental control, digital code signing, etc.
- ◆ Real-time communications:
  - Intel, Progressive Networks, major telcos
  - Support of 100 others
- ◆ ActiveX architecture: over 60 companies
- ◆ Java language: Sun
- ◆ Business Application Integration: SAP
- ◆ Etc.

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# Office & Content

- ◆ Office: Support Internet standards:
  - Authoring: save-as HTML option
  - “ActiveX” Documents, free viewers
- ◆ MSN:
  - site on the Internet
  - switch to standard Internet/ActiveX technologies
- ◆ Content:
  - Focus on key area’s: news (MSNBC) travel & local information, games, kids

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# Network Operators

- ◆ Network Operator Platform:
  - Winning Network Operator, Cable Operator and Internet Service Provider infrastructure is key
  - MS will have focused product and sales effort on this segment
    - utilizing assets from MSN & MITV efforts

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# Road Map: Internet Client

- ◆ Internet Explorer line
  - Win32, Mac, and Windows 3.1 support
  - Rapid releases

**Now**

- ◆ Internet 3.0
  - “Componentized”: extensible, services available to other apps
  - Full ActiveX support: controls, scripting, multimedia
  - Netscape superset

**Mid 96**

- ◆ Internet add-on (“Nashville”) for Windows 95, Windows NT
  - Integrated Windows and Internet Explorer
  - Communications: phone, conferencing

**H2 96**

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# Road Map: Internet Server

- ◆ **Microsoft BackOffice**
  - **Internet Information Server in Windows NT Server**
    - **Highest Performance Server**
    - **Extensible via ISAPI, ActiveX**
  - **Database connector for SQL Server**

**Now**

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- ◆ **Additional services coming in H2 '96**
  - **Proxy**
  - **Content management**
  - **Microsoft Exchange connector**
  - **Merchant services**

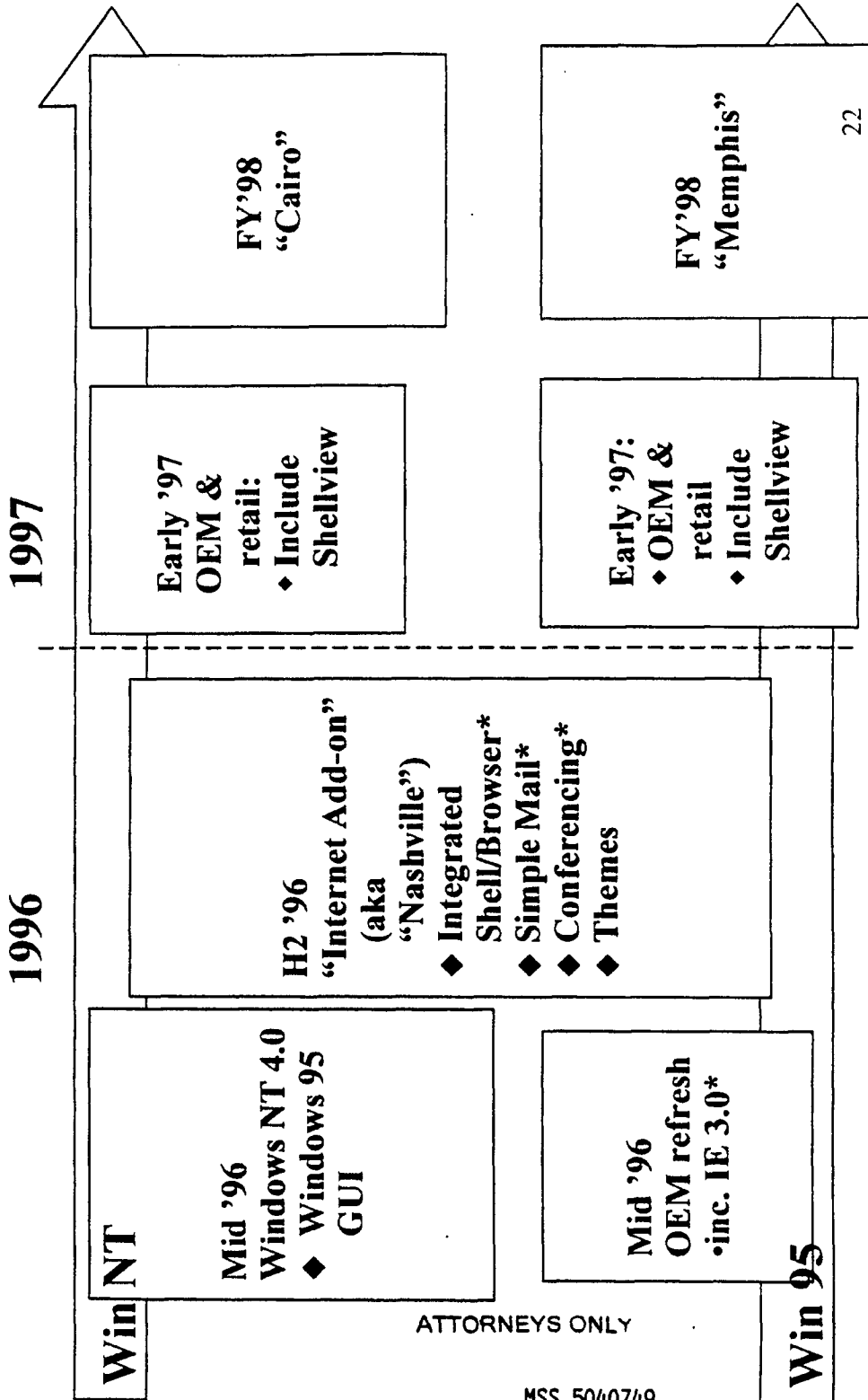
**H2 96**

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# Upcoming Windows Releases



\* free download too

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# Cost Of Ownership/Manageability

- ◆ Invest in Windows 95/  
Windows NT Workstation
  - Plug and play
  - SIPC
  - Common profiles
- ◆ SMS
  - Customer satisfaction releases
- ◆ Will start major, new corporate initiative

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# Types of ‘Non-PC’ opportunities

- ◆ Corporate network computing terminal
  - lower cost of administration
  - *what is functionality/compatibility cost?*
- ◆ Low-cost consumer devices
  - low cost
  - simplicity
  - *high-bandwidth bi-directional links rare in consumer - will be hard to host interactive pages*
- ◆ PDA's
  - form factor

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# Corporate “Network Terminals”

- ◆ Characteristics:
  - permanent, high-bandwidth connection
  - cost-of-ownership dominates initial purchase cost
  - compatibility requirements high

## ◆ History:

- X-terminals
- Diskless workstation

## ◆ Lot of very woolly thinking by OEMs

- but willing to experiment

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# Primary response to “Network Terminals”

- ◆ Treat the cause: cost-of-ownership
  - corporations want lower overall cost-of-ownership
  - not:
    - limited functionality
    - no compatibility
    - device cost is secondary issue
- ◆ Need equivalent of “Plug & Play” initiative focused on top-to-bottom corporate cost-of-ownership issue

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# Response to “Network Terminals” contd.

- ◆ Engage with OEM’s
- ◆ Encourage OEMs to build scaleable family:
  - x86 CPU, configurable memory
  - from simple “Citrix” terminal to full diskless PC
  - possible use of Pegasus OS in ROM as “super-BIOS”
- ◆ Keep most corporations on a PC track
  - maybe diskless

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# MS “Rallying” Events

- ◆ 12-7-95 Internet Day
- ◆ 3-12-96 Internet Professional Developers Conference (“PDC”)
- ◆ 6-13-96 “Intranet Day”
- ◆ H2’96: “Cost-of-ownership” Day

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# MS requests of Intel

- ◆ Exploit IE features on Intel Home Page!
- ◆ Support ActiveX in evangelism & development activities
- ◆ Implement Intranet using Office/Windows/BackOffice
- ◆ Work together on “Cost-of-ownership” mission

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