Microsoft Internet Directions

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GOVERNMENT
EXHIBIT
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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

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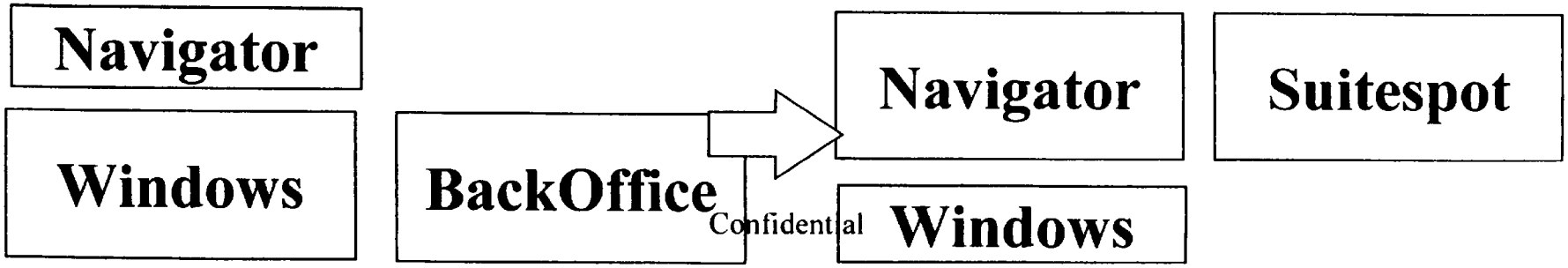
Netscape

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



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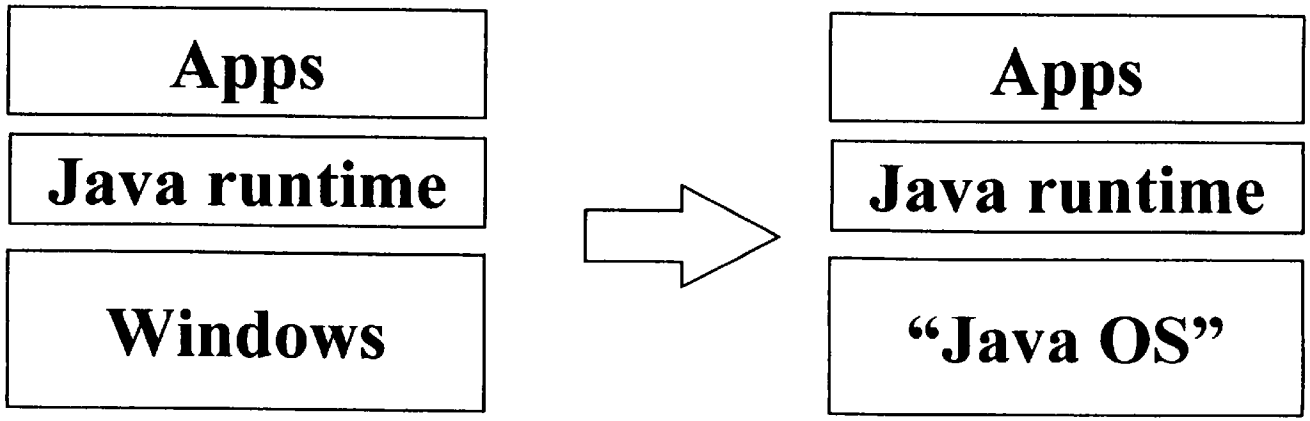
Java

- 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

Interactive distributed applications: Common paradigm for client/server computing

Interactive multimedia: Richer communications between *people*

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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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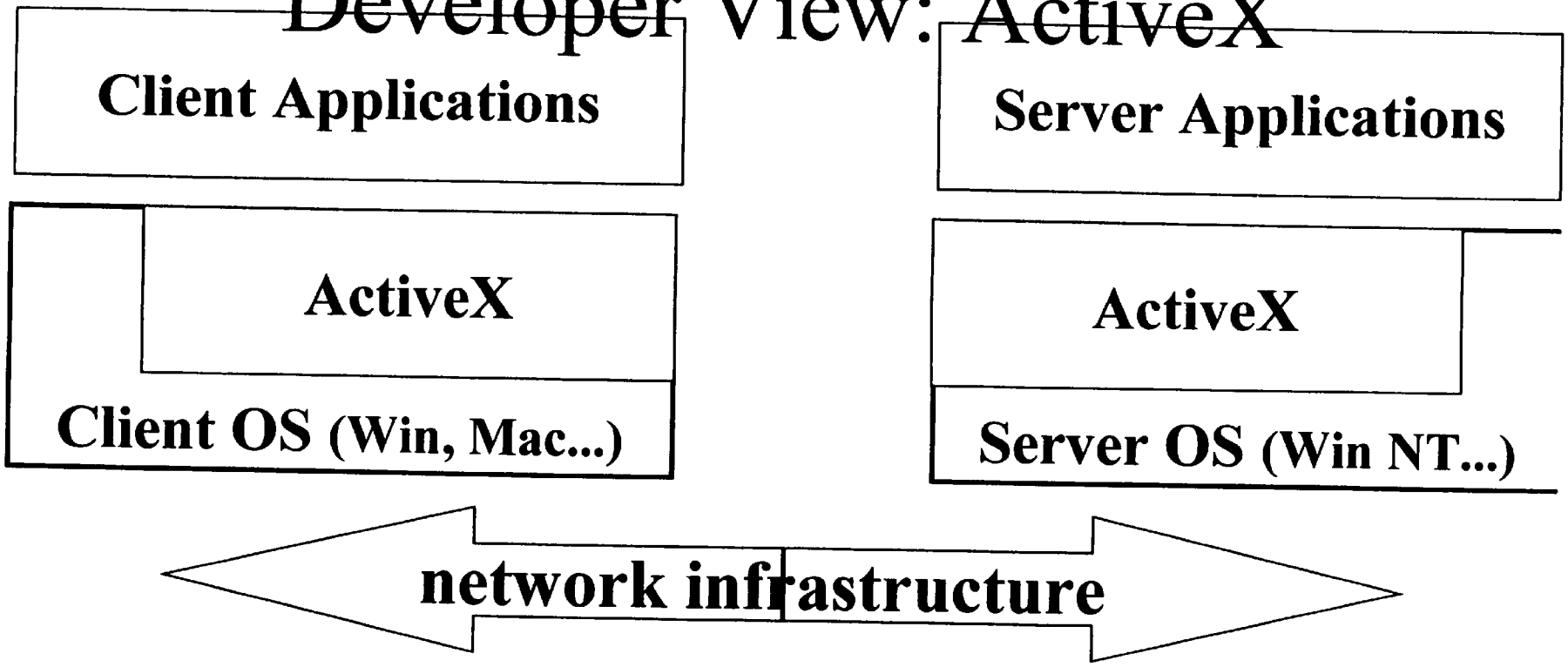
Developer View: ActiveX



- 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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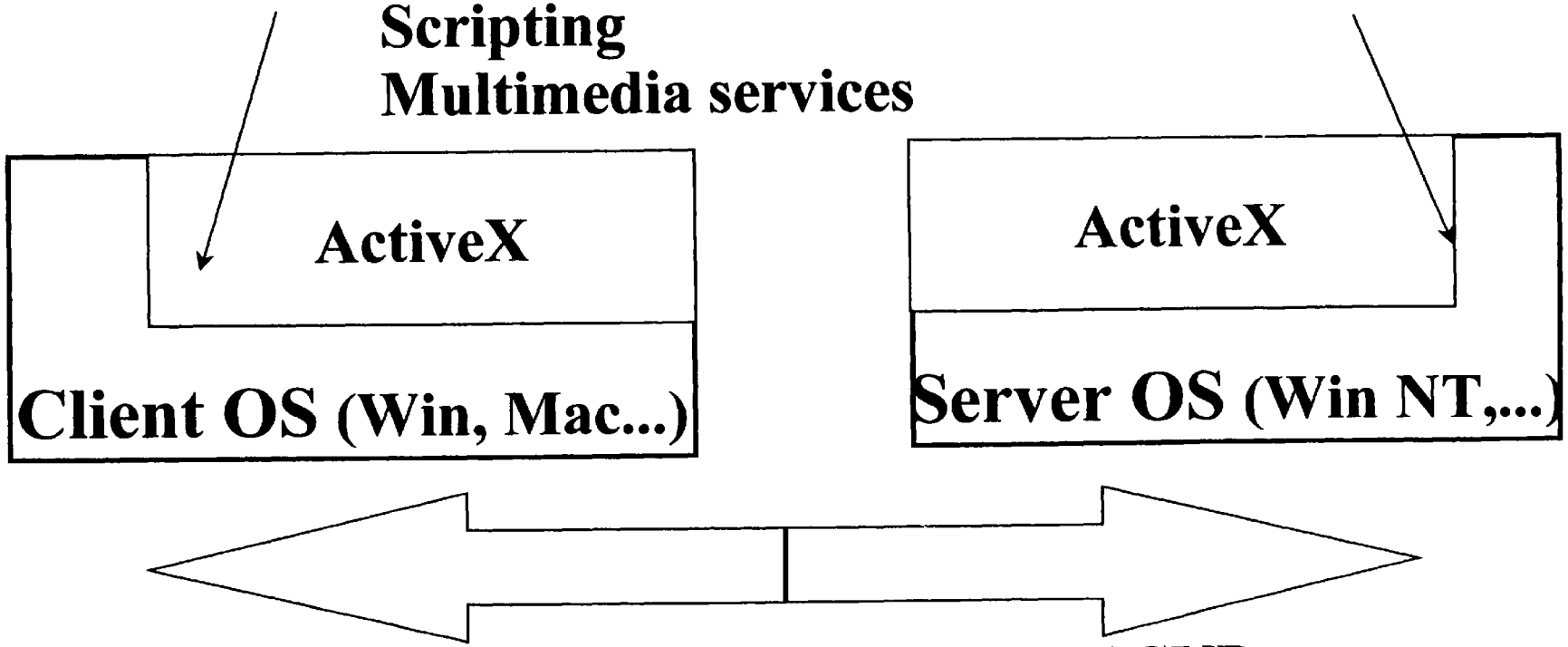
ActiveX open architecture

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



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

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Tools Family

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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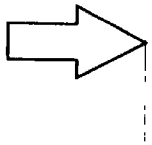
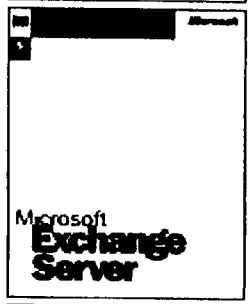
Embracing And Extending For User And Business: The Intranet

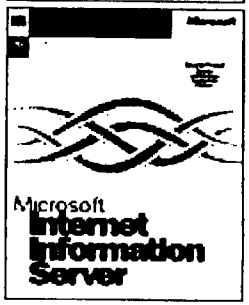
Windows:
Integrated Explorer, one tool for viewing information



Structured data



Messages



WebPages

Existing files, documents

Microsoft BackOffice:

- **Integrated platform**
  - **Administration**
  - **Security**
  - **Scaleable**
  - **Complete**
  - **Extensible**

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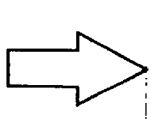
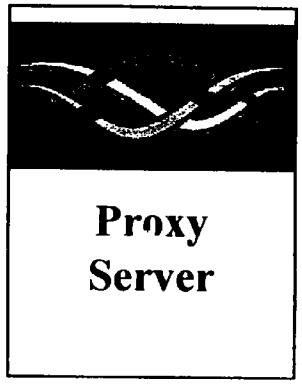
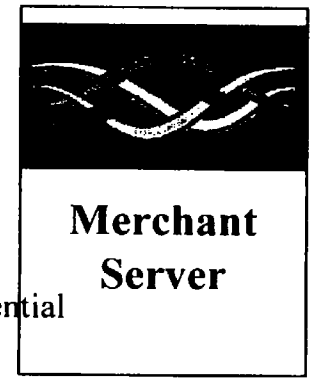
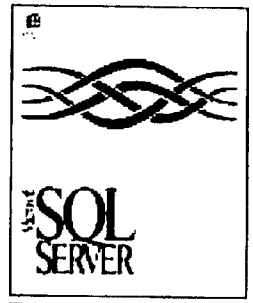
Extending Out To The World:

Integrated Client









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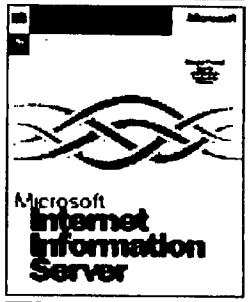

WebPages

Existing files, documents

Integrated Services

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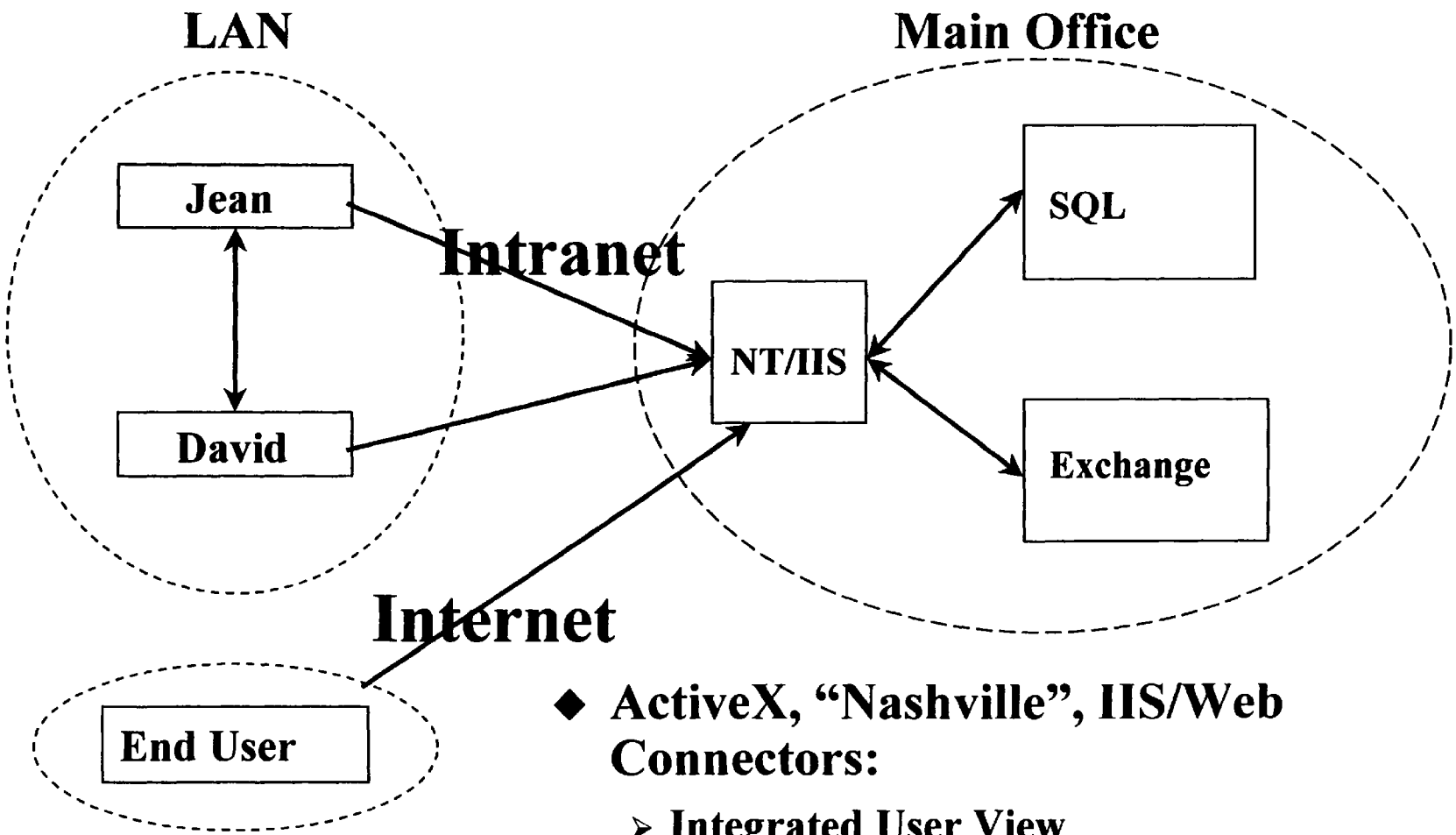
Demonstration: "Windemere Real Estate"



- ActiveX, "Nashville", IIS/Web Connectors:
  - Integrated User View
  - Integrated Infrastructure for Business

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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

Now

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

Mid 96

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

H2 96

- **Internet add-on ("Nashville") for Windows 95, Windows NT**
  - Integrated Windows and Internet Explorer
  - Communications: phone, conferencing

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Road Map: Internet Server

Now

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

H2 96

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

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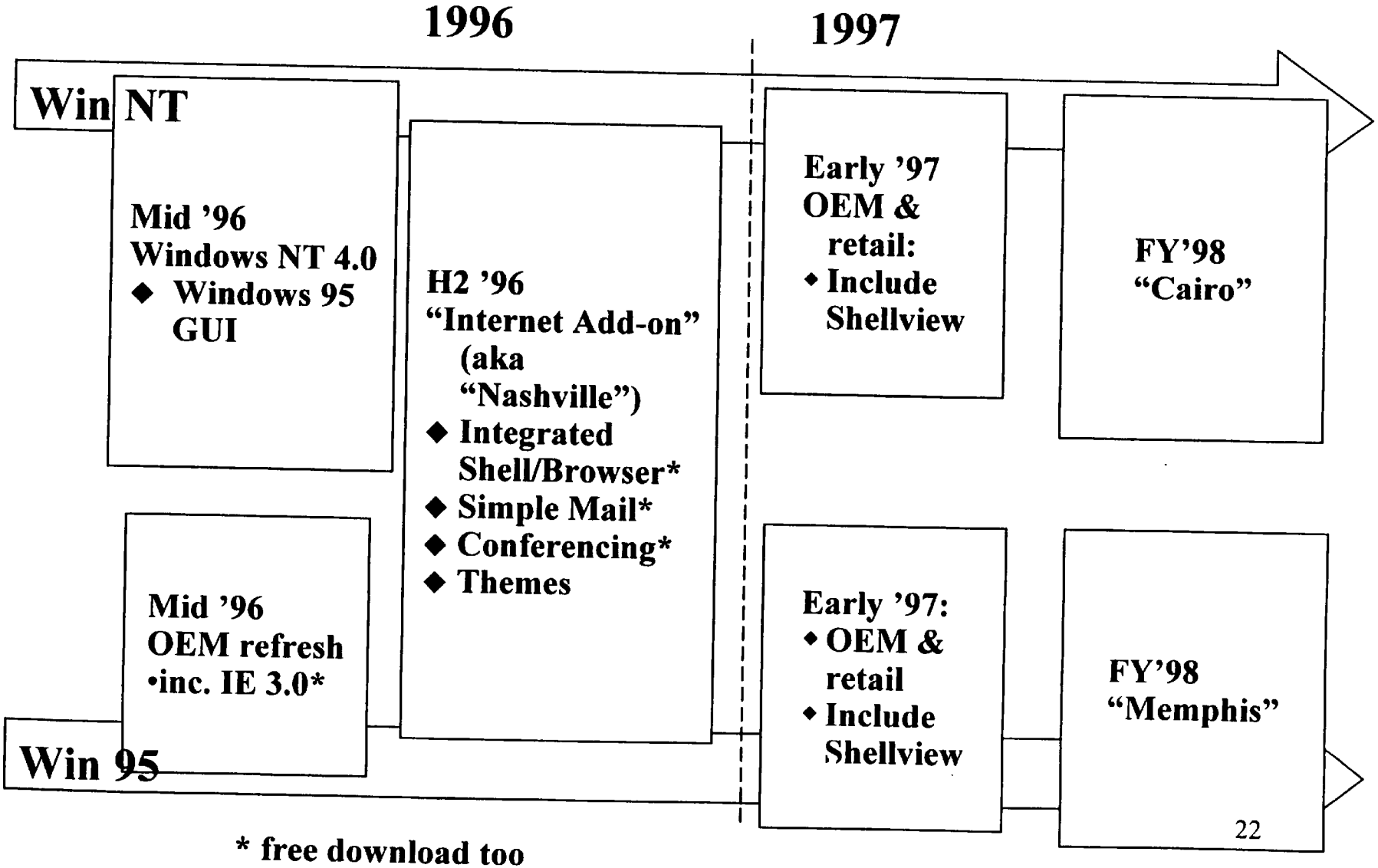
Upcoming Windows Releases



* 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/compatibiliy 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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