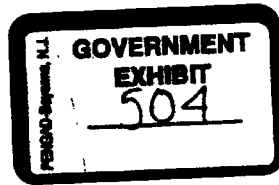


Microsoft Internet Directions

Paul Maritz
Microsoft
April'96

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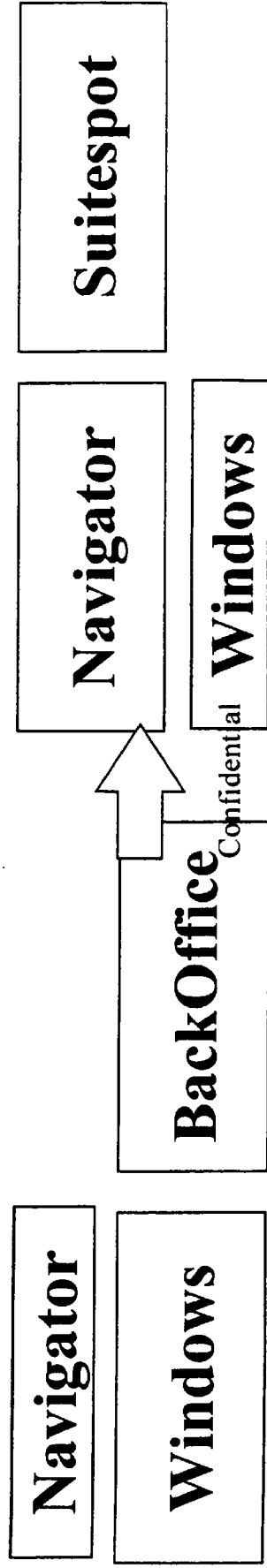
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The Internet - Why Does It Matter?

- ◆ 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^{Confidential}

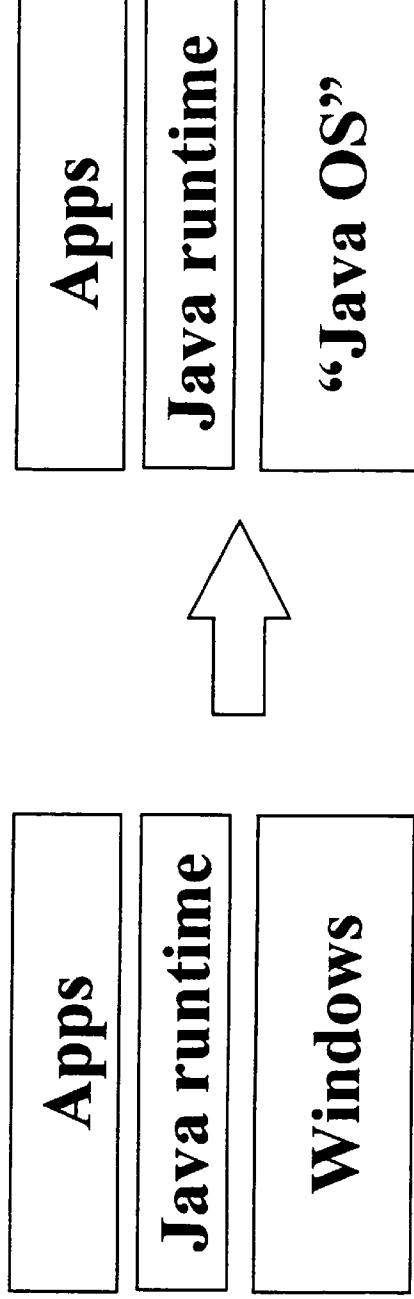
Netscape

- ◆ 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”



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**

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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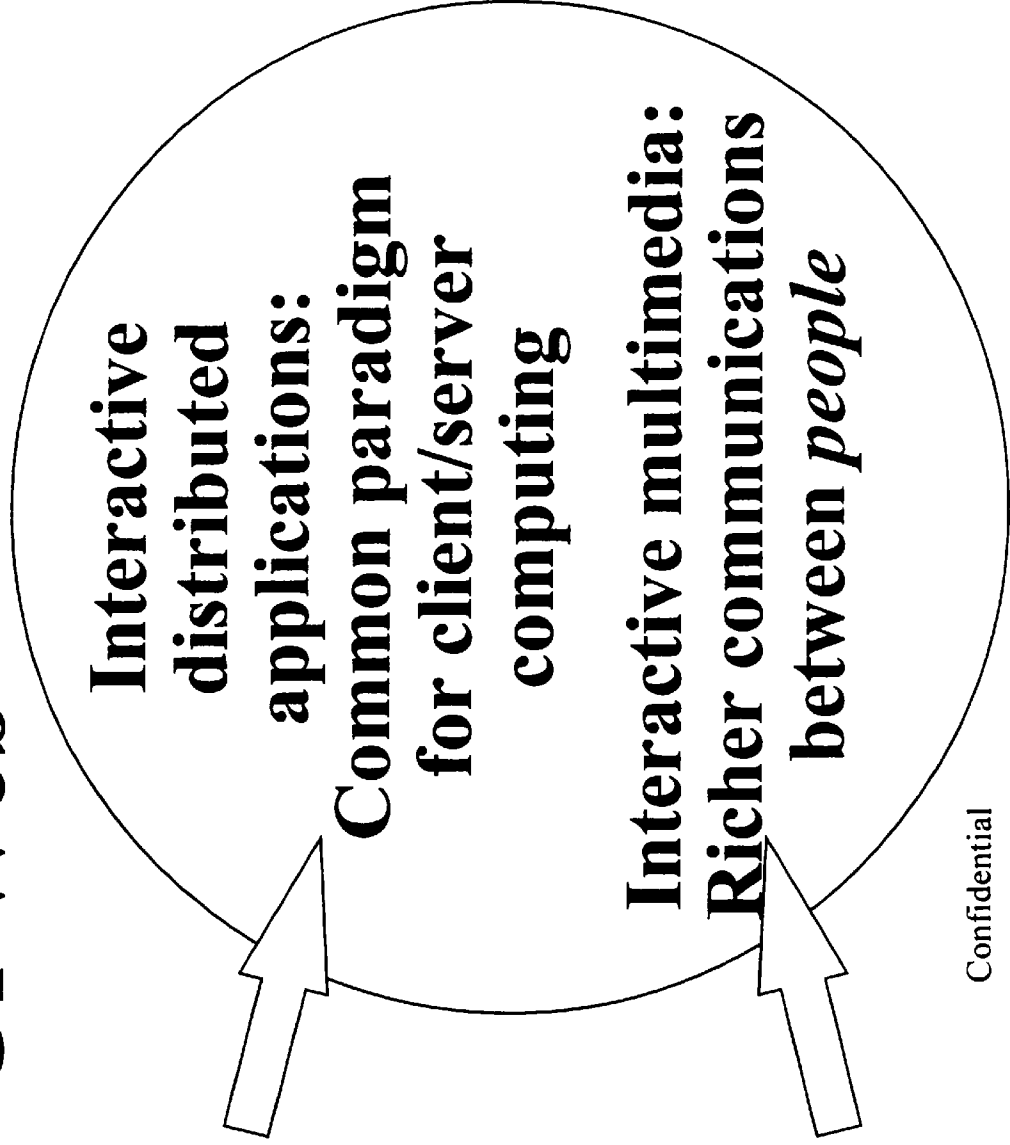
Synthesis - Best Of PC, Best Of Web

The PC revolution:

Standalone apps

The Internet revolution:

Static pages



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◆ A Better Synthesis For: Developer:

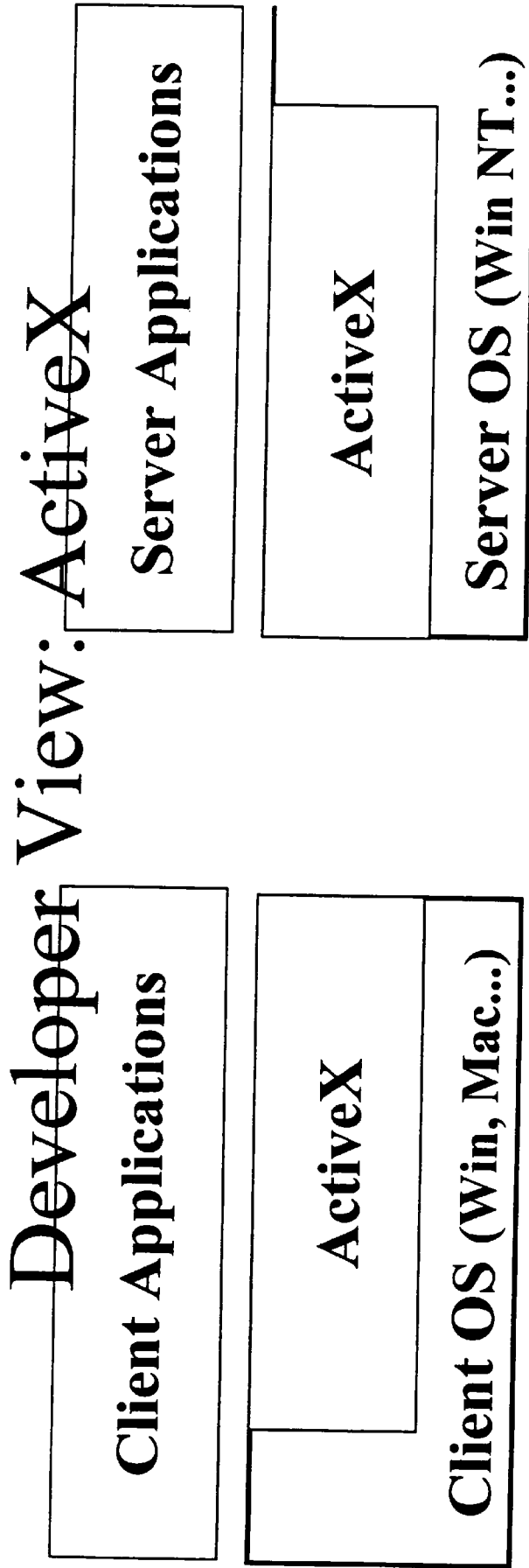
- ActiveX - common way to develop client/server apps for PC LAN and Internet worlds
- Full set of tools

◆ User:

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

◆ Business:

- Common, upward compatible infrastructure for LAN, “Intranet”, Internet



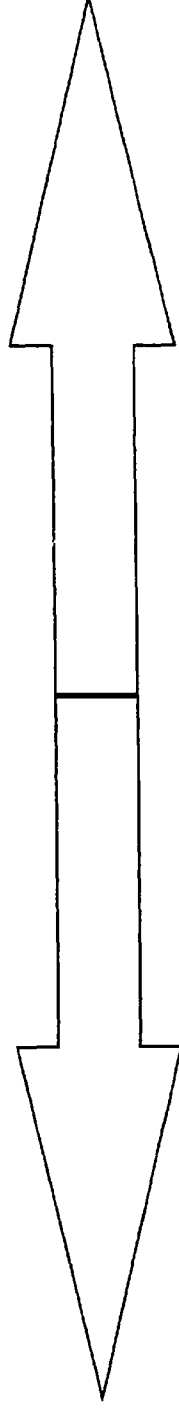
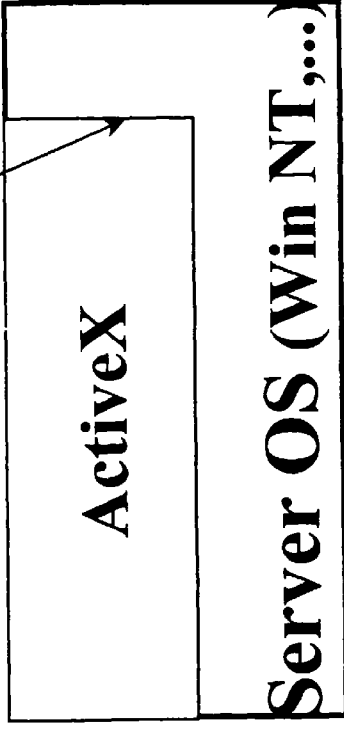
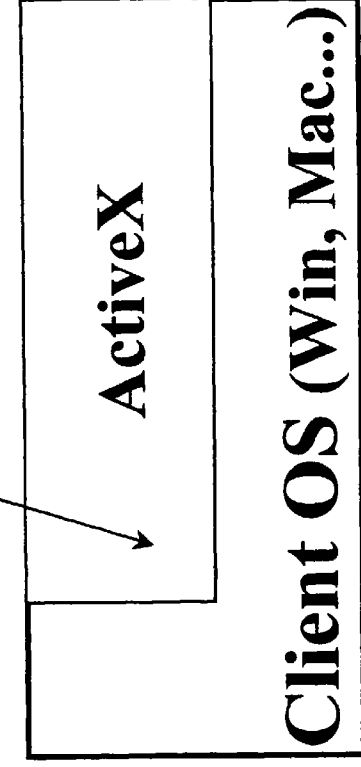
- ◆ Works for Internet and PC apps
- ◆ Leverage existing investment
- ◆ Open, extensible
- ◆ Cross-platform (Win, Mac, etc.)
- ◆ Language neutral (C++, VB, Java, etc.)

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ActiveX open architecture

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

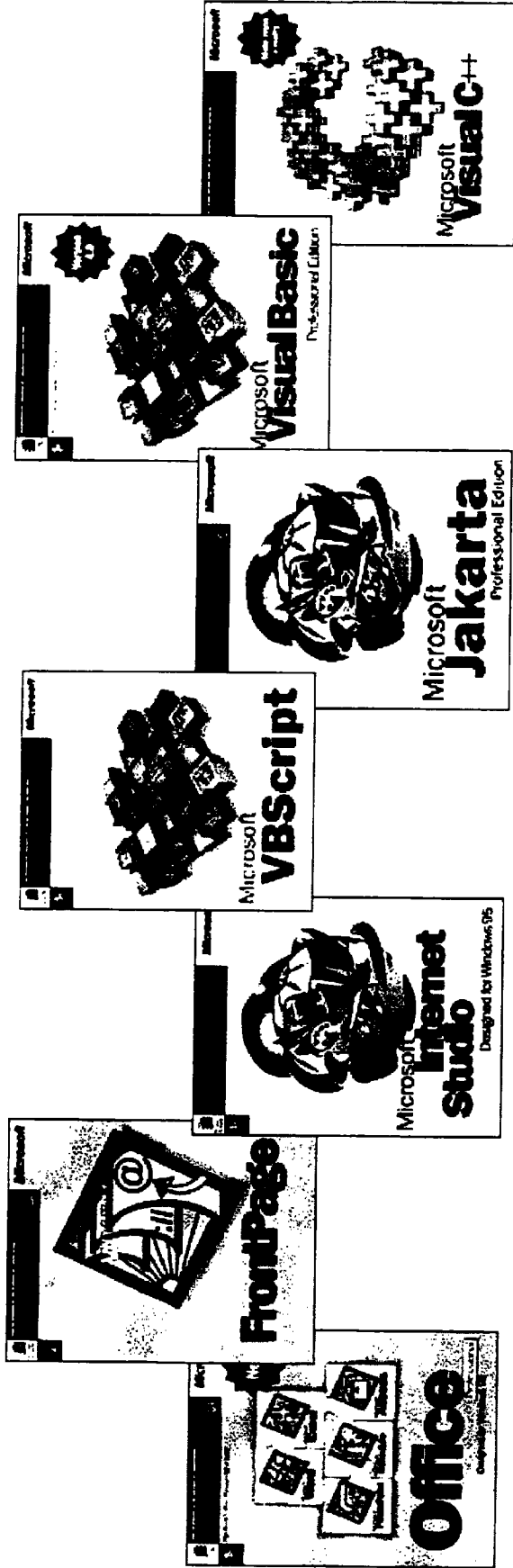
Scripting
Multimedia services



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

Safety: Digital code signing

Tools Family



Less coding, more
like a “document”

More coding, more
like an “application”

Windows and ActiveX technologies

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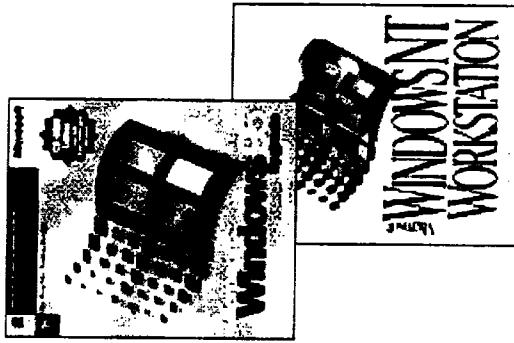
What About Java?

- ◆ **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**

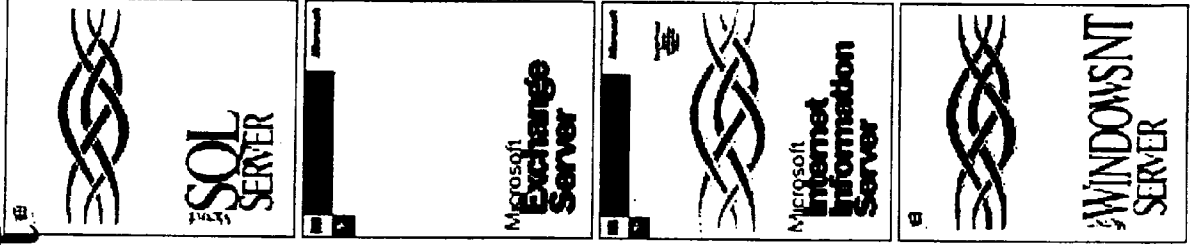
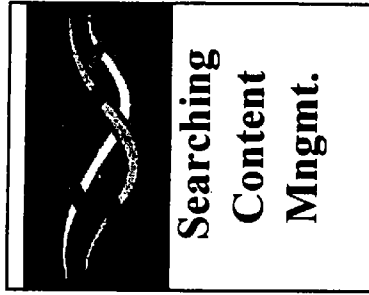
Embracing And Extending For User And Business: The Intranet

Windows:

Integrated Explorer, one tool for viewing information



Microsoft®
BackOffice™

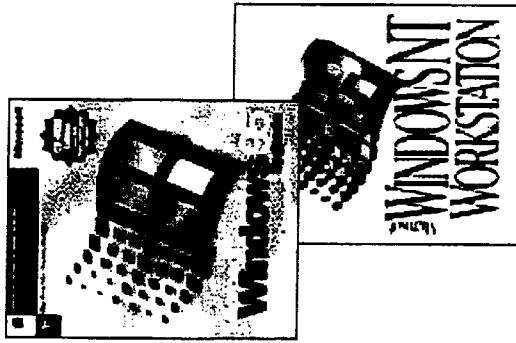


- ◆ Integrated platform
 - Administration
 - Security
 - Scalable
 - Complete
 - Extensible

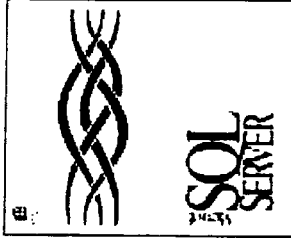
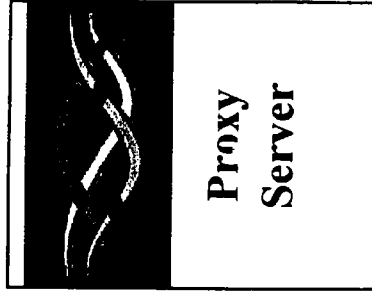
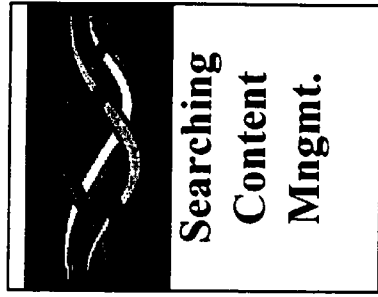
**Microsoft
BackOffice:**

Extending Out To The World:

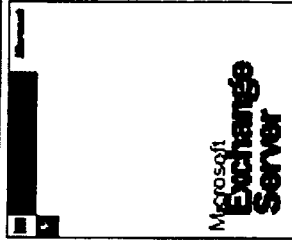
Integrated Client



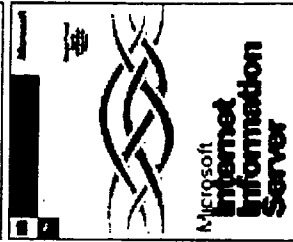
Microsoft®
BackOffice™



Structured data



Messages



WebPages

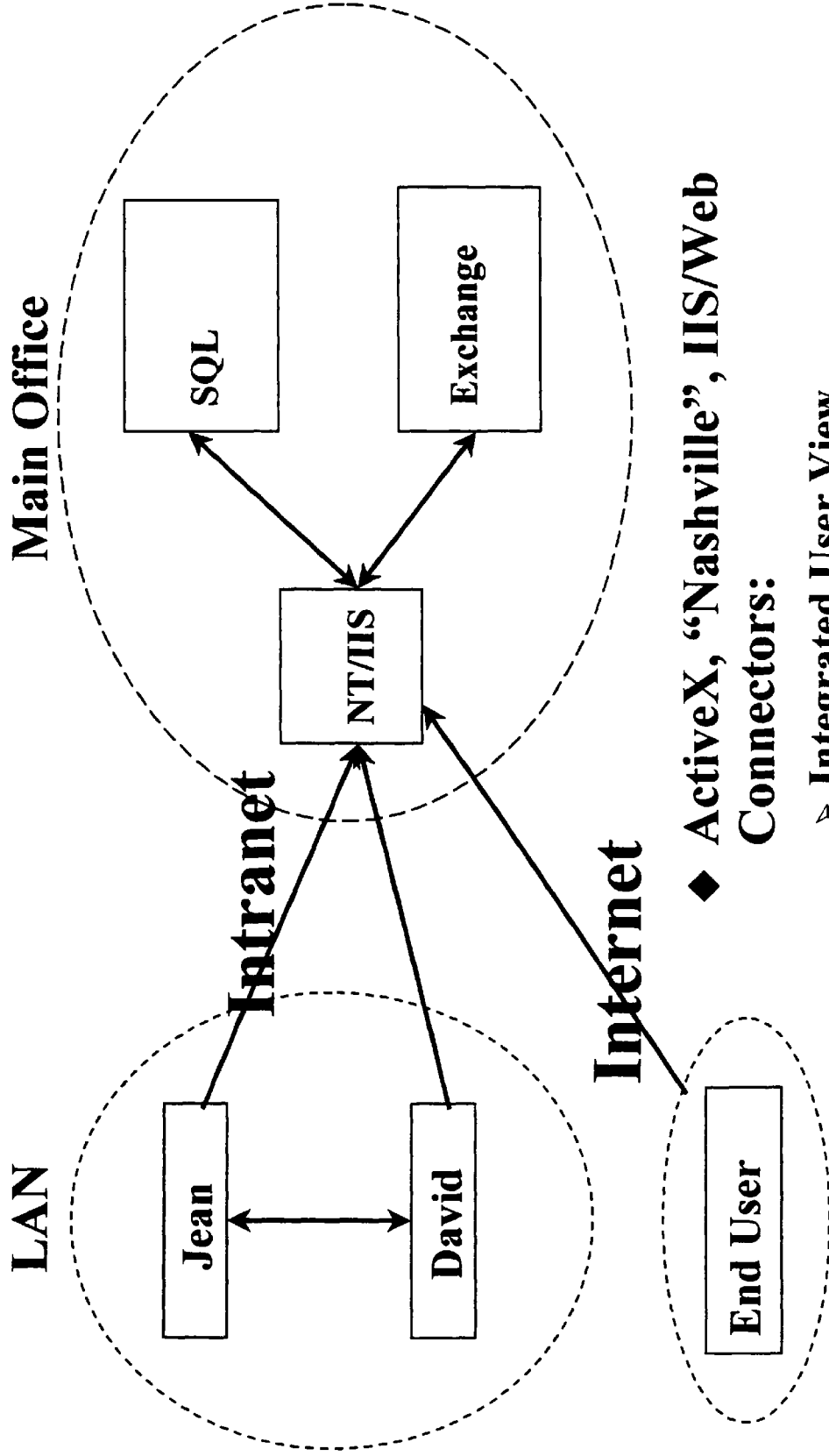


Existing files, documents

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.

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

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

Now

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

H2 96

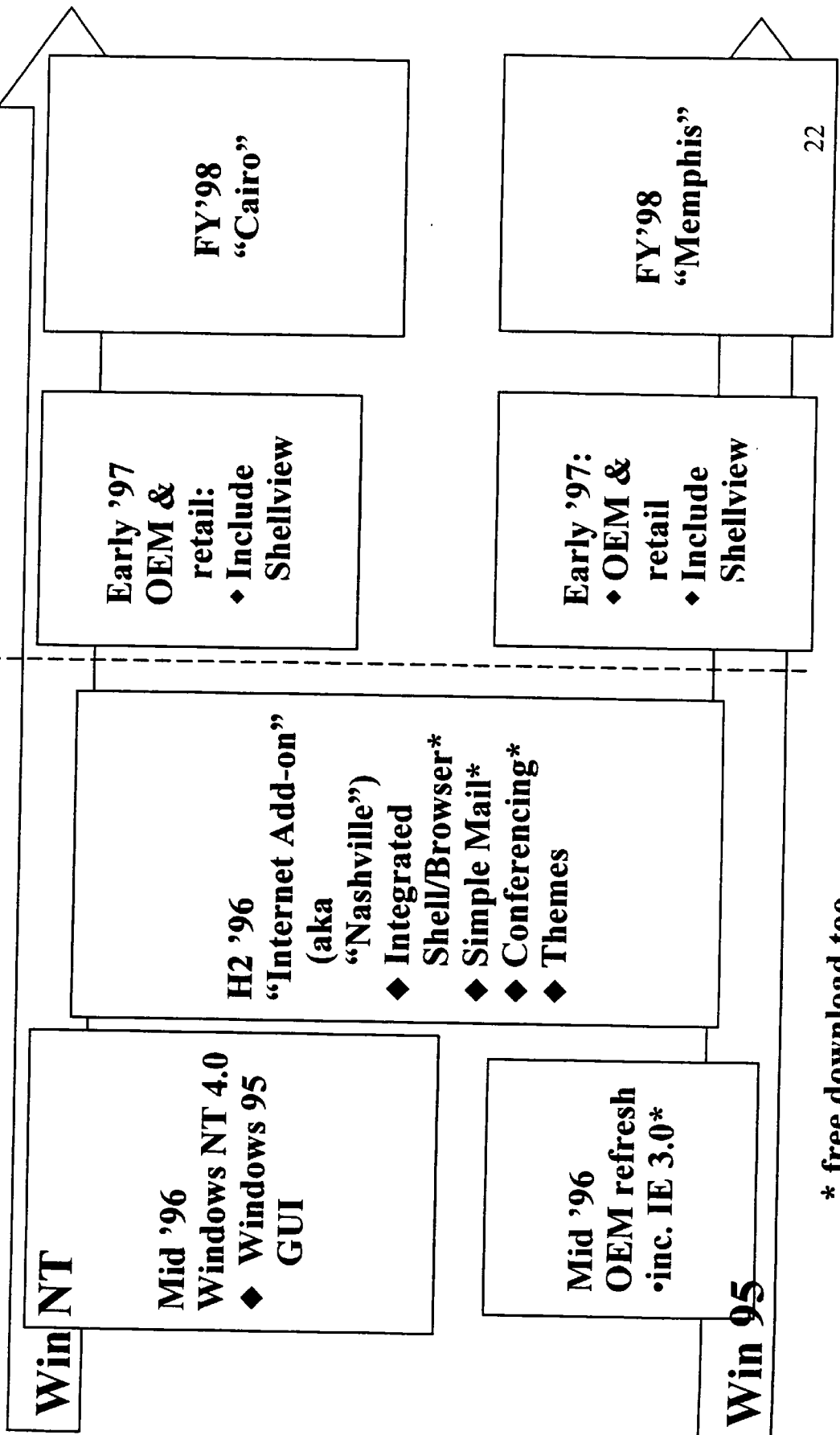
- ◆ **Additional services coming in H2 '96**
 - **Proxy**
 - **Content management**
 - **Microsoft Exchange connector**
 - **Merchant services**

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Upcoming Windows Releases

1996

1997



* free download too

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

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

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