Overview Of Windows *"Chicago"*
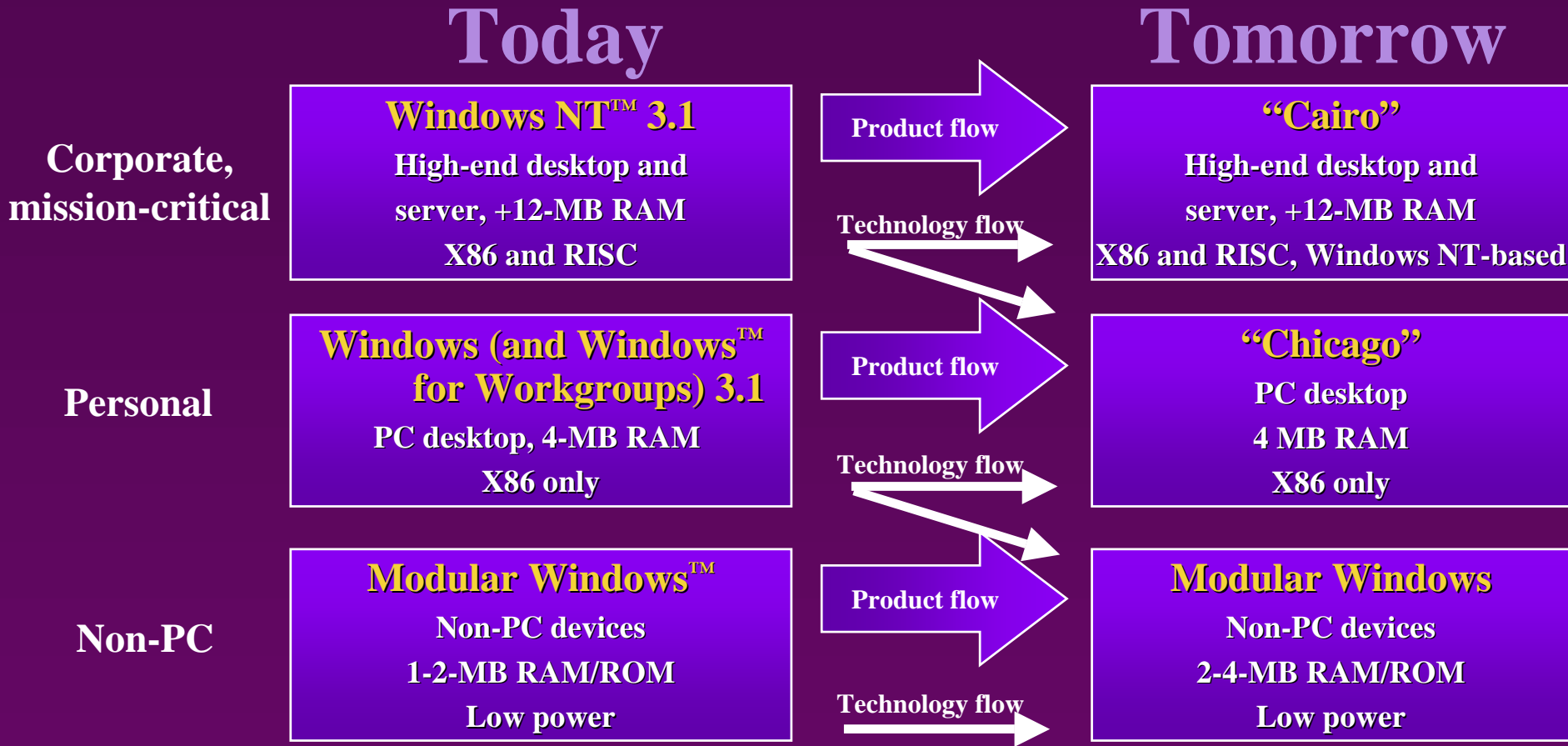

Tammy Steele
Technical Evangelist
Systems Marketing
Microsoft Corporation

Agenda

◆ **Product overview**

◆ **Product details**

◆ **Writing great Win32® applications**

◆ **Wrap-up**

Windows-Based Products Summary

	Today		Tomorrow
Corporate, mission-critical	**Windows NT™ 3.1** **High-end desktop and server, +12-MB RAM** **X86 and RISC**	*Product flow* *Technology flow*	**"Cairo"** **High-end desktop and server, +12-MB RAM** **X86 and RISC, Windows NT-based**
Personal	**Windows (and Windows™ for Workgroups) 3.1** **PC desktop, 4-MB RAM** **X86 only**	*Product flow* *Technology flow*	**"Chicago"** **PC desktop** **4 MB RAM** **X86 only**
Non-PC	**Modular Windows™** **Non-PC devices** **1-2-MB RAM/ROM** **Low power**	*Product flow* *Technology flow*	**Modular Windows** **Non-PC devices** **2-4-MB RAM/ROM** **Low power**

- **"Chicago" delivers features tuned for personal needs**
- **"Cairo" delivers "Chicago" features plus features tuned for corporate needs**

Mission For Windows *"Chicago"*

- ◆ **End users**
  - ➢ **Make using PCs easy for everyone**
- ◆ **IS managers**
  - ➢ **Reduce cost of deployment**
- ◆ **The industry**
  - ➢ **A no-compromise standard for PCs**
  - ➢ **Great new applications on a mainstream platform**

Key Benefits OF Windows *"Chicago"*

- **Easy**
  - Easy to install and configure; Plug and Play
  - Easy to use
  - Easy to connect and manage
- **Powerful 32-bit OS**
  - Complete, bootable OS
  - 32-bit APIs, 32-bit OLE 2.0, preemption, threads
- **Great connectivity**
  - Integrated, high performance, network-independent
  - LAN, WAN, remote; net, mail, fax

Safe, Hassle-Free Upgrade

- **Compatible**
  - ➢ **MS-DOS®-based applications and drivers**
  - ➢ **Windows 3.x-based applications and drivers**
- **Performs well on installed base platform**
- **Easy transition for Windows 3.x-based users**
- **Reliability improvements throughout**
- **Replaces Windows 3.1 and Windows for Workgroups**

Performance Goal

If all a user does is change from Windows 3.1 to "Chicago", performance will be as good or better than under Windows 3.1*

*On a 386DX with +4-MB RAM

Schedule

◆ **March: limited release to end users for shell/UI feedback**

◆ **April/May: broad beta release (M6)**

◆ **Second beta release 2-3 months after M6**

◆ **Planning "Early Experience" program to get "Chicago" prerelease into lots of users hands**

◆ **On target for 2H '94, but will ship when ready**

Plug And Play

◆ **Software**

- ➢ **Safe, simple setup**
- ➢ **Easy system configuration**

◆ **Hardware**

- ➢ **Better configuration of current hardware devices**
- ➢ **Automatic configuration of new devices**

Intuitive Interface

◆ **New shell**

- ➢ **Great for new and existing users**
- ➢ **Unified manager and desktop**
- ➢ **Drag and drop everywhere**
- ➢ **OLE 2.0-enabled**
- ➢ **Long filenames**
- ➢ **File viewers**
- ➢ **Pen gestures built-in**
- ➢ **Improved printing interface**
- ➢ **Improved MS-DOS applications interface**

OLE 2.0

- ◆ **Applications**
  - ➤ **Visual Editing**
  - ➤ **Drag and drop across applications**
  - ➤ **Automation**
  - ➤ **Compound Documents**
- ◆ **System**
  - ➤ **Drag and drop across desktop, tray, cabinet**
  - ➤ **Ability to display document properties**
- ◆ **Application - system communication**
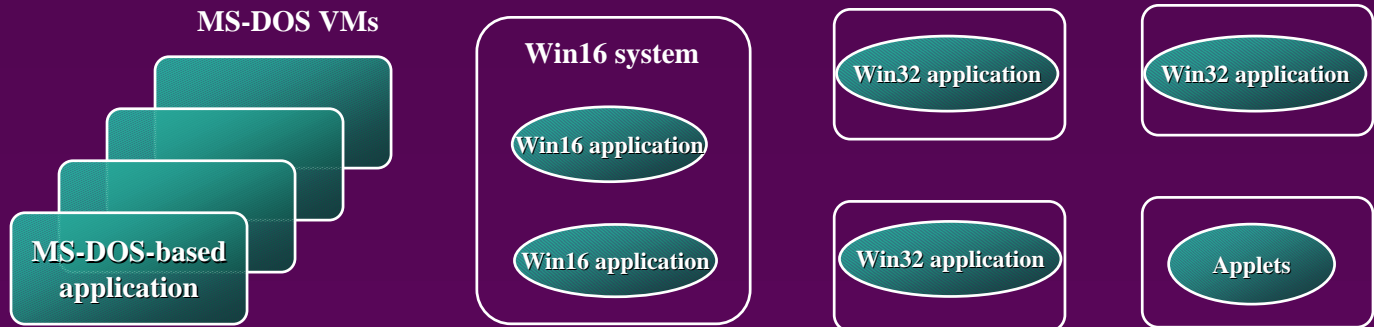 - ➤ **Drag and drop between applications and system**
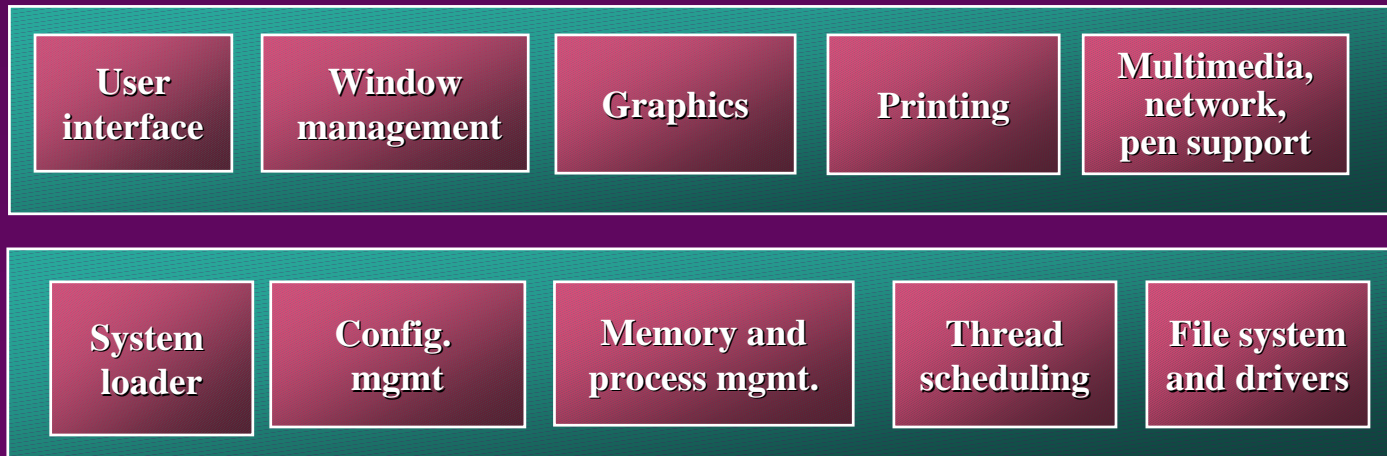 - ➤ **Interapplication programming**

32-Bit Multitasking Operating System

- ◆ **32-bit protect-mode components**
  - ➢ Preemptive multitasking base
  - ➢ File system
  - ➢ Communications
  - ➢ Graphics
  - ➢ Networking
  - ➢ Printing
- ◆ **32-bit API**

Windows *"Chicago"* Architecture

Applications

MS-DOS VMs

Win16 system

Win32 application

Win32 application

Win16 application

MS-DOS-based application

Win16 application

Win32 application

Applets

Operating system

User interface	Window management	Graphics	Printing	Multimedia, network, pen support

System loader	Config. mgmt	Memory and process mgmt.	Thread scheduling	File system and drivers

Hardware

Hardware

File System

Win16 application	Win32 application	MS-DOS-based application

Installable File System Manager

VFAT	CD-ROM	Network Redir, other

Device drivers

Devices

Communications

Win16 application	Win32 application	MS-DOS-based application

Win16 API		
COMM.DRV	Win32 API	COMBUFF.386 VCD.386
VCOMM.386		
Port driver VxDs		

Port devices (COM, LPT, etc.)

Graphics

Application

Graphics device interface

Image color matching

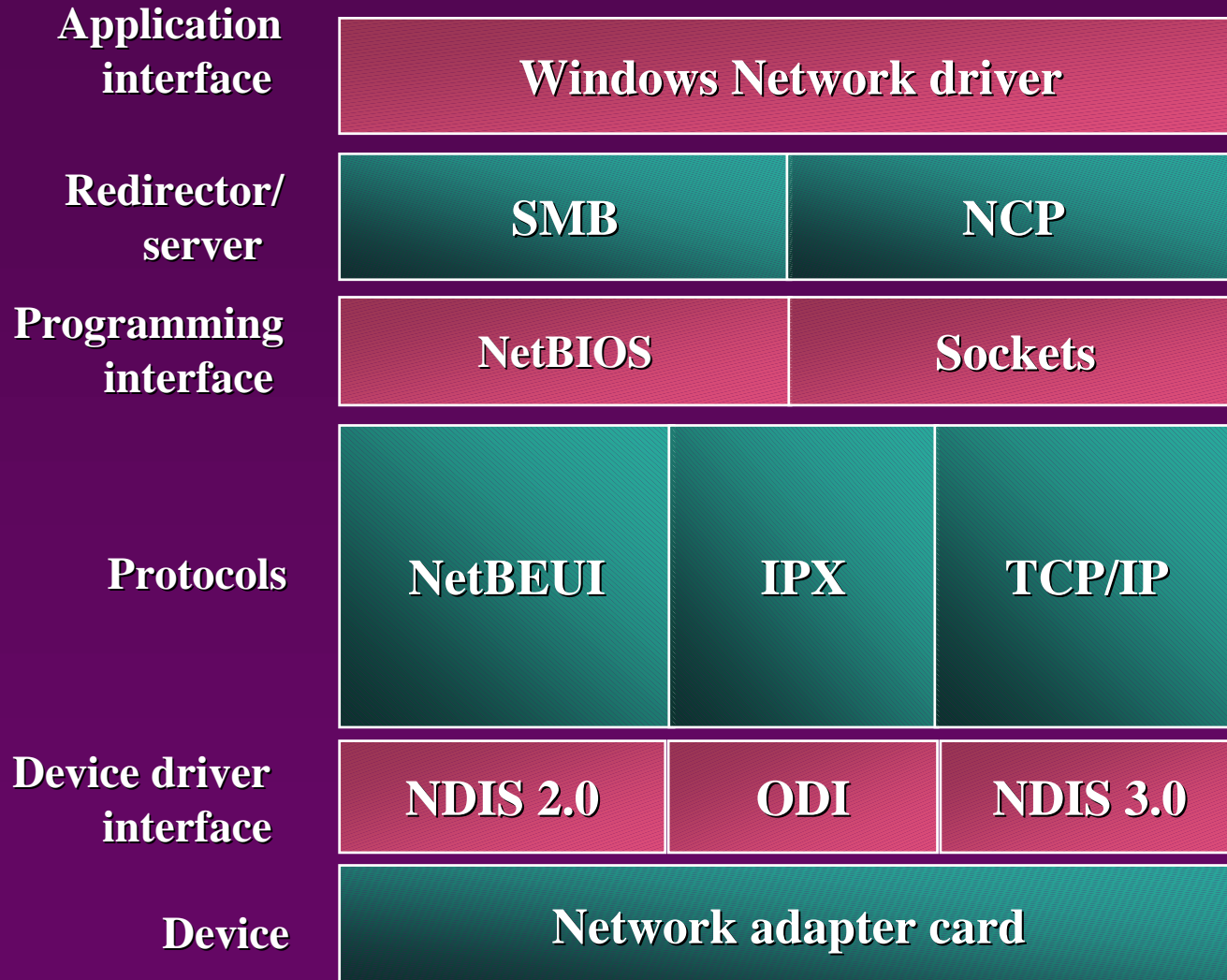**Display minidriver**

Printer minidriver

Universal printer driver

Graphics DIB engine

Display

Printer

Networking

Application interface	Windows Network driver		
Redirector/ server	SMB	NCP	
Programming interface	NetBIOS	Sockets	
Protocols	NetBEUI	IPX	TCP/IP
Device driver interface	NDIS 2.0	ODI	NDIS 3.0
Device	Network adapter card		

Printing

- **32-bit printing subsystem**
  - **Background printing**
  - **Metafile spooling**
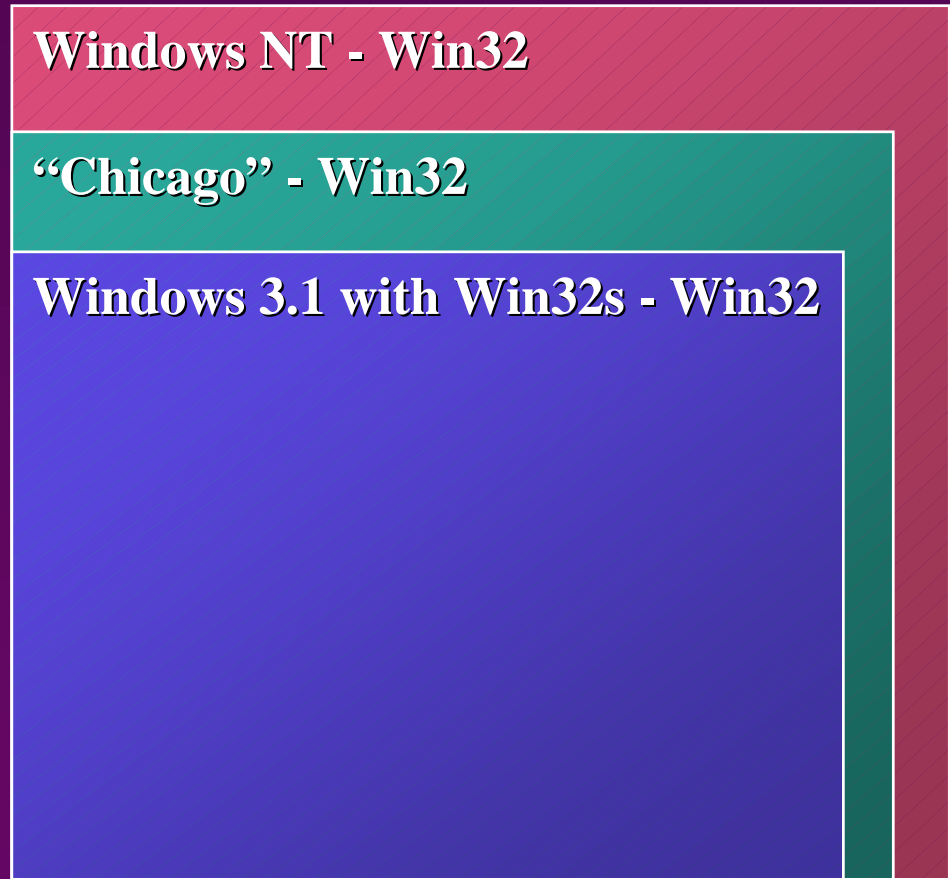 - **Bidirectional printing device support**

Multimedia

- **32-bit multimedia subsystem**
  - ➤ **Audio, video, image compression services**
  - ➤ **MCI for VCR, digital video**
- **Improved multimedia** utilities
  - ➤ **OLE 2.0-enabled**
  - ➤ **Better Sound Recorder, Media Player, MIDI applets**
  - ➤ **Hand Control Device, Mixer and Volume Control applets**
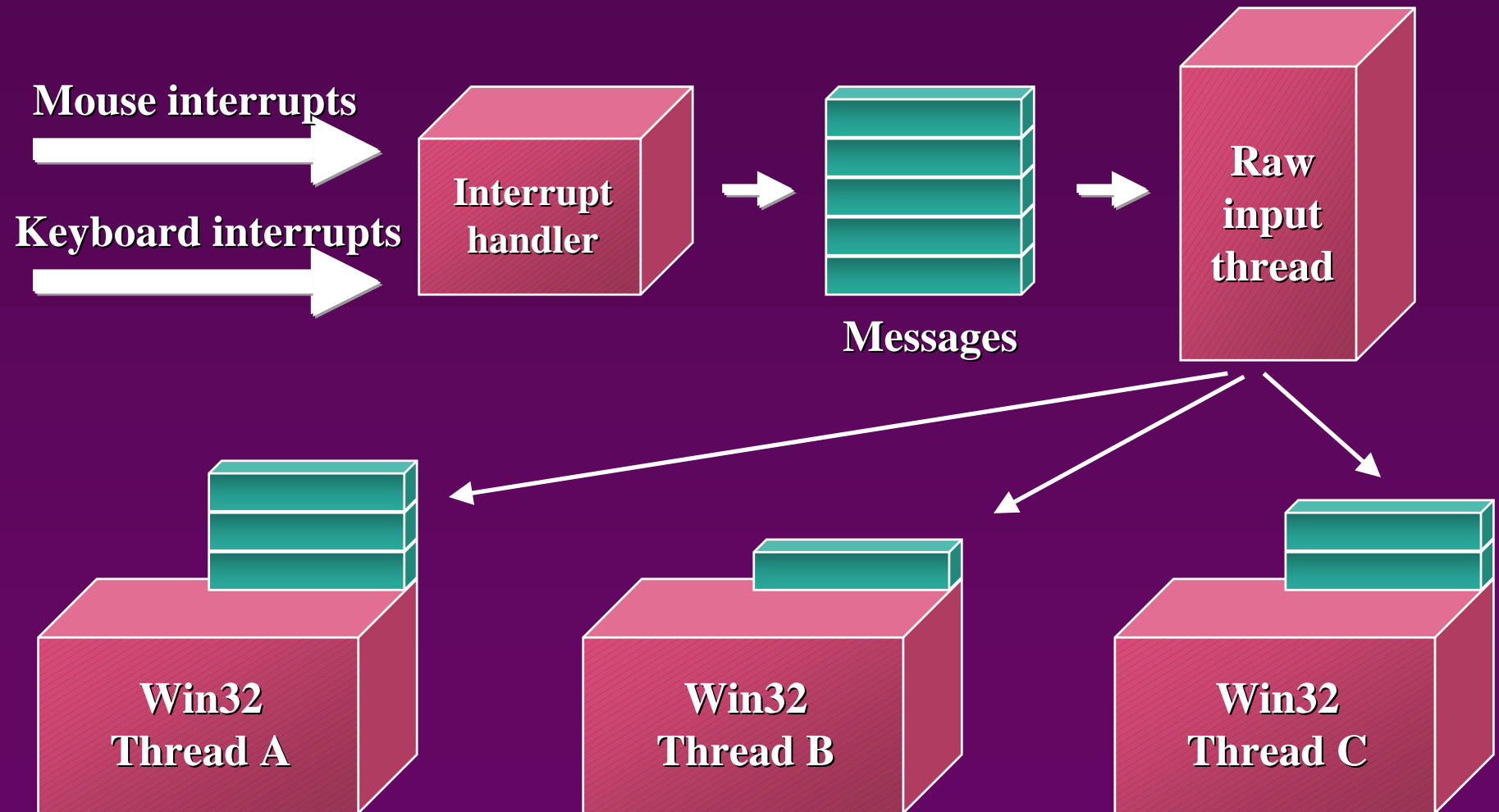
32-Bit Application Support
Upward API compatibility

- ◆ **Windows 3.1 - Win32s™**
  - ➤ **Base 32-bit APIs**
- ◆ **"Chicago" - Win32**
  - ➤ **Base 32-bit APIs**
  - ➤ **Preemptive multitasking**
  - ➤ **Asynchronous input**
  - ➤ **Multithreading**
  - ➤ **Beziers, paths**
  - ➤ **Image Color Matching**
  - ➤ **Modem control**
- ◆ **Windows NT - Win32**
  - ➤ **Complete 32-bit APIs**

Windows NT - Win32

"Chicago" - Win32

Windows 3.1 with Win32s - Win32

32-Bit Applications
Asynchronous input model

Mouse interrupts

Keyboard interrupts

Interrupt handler

Messages

Raw input thread

Win32 Thread A
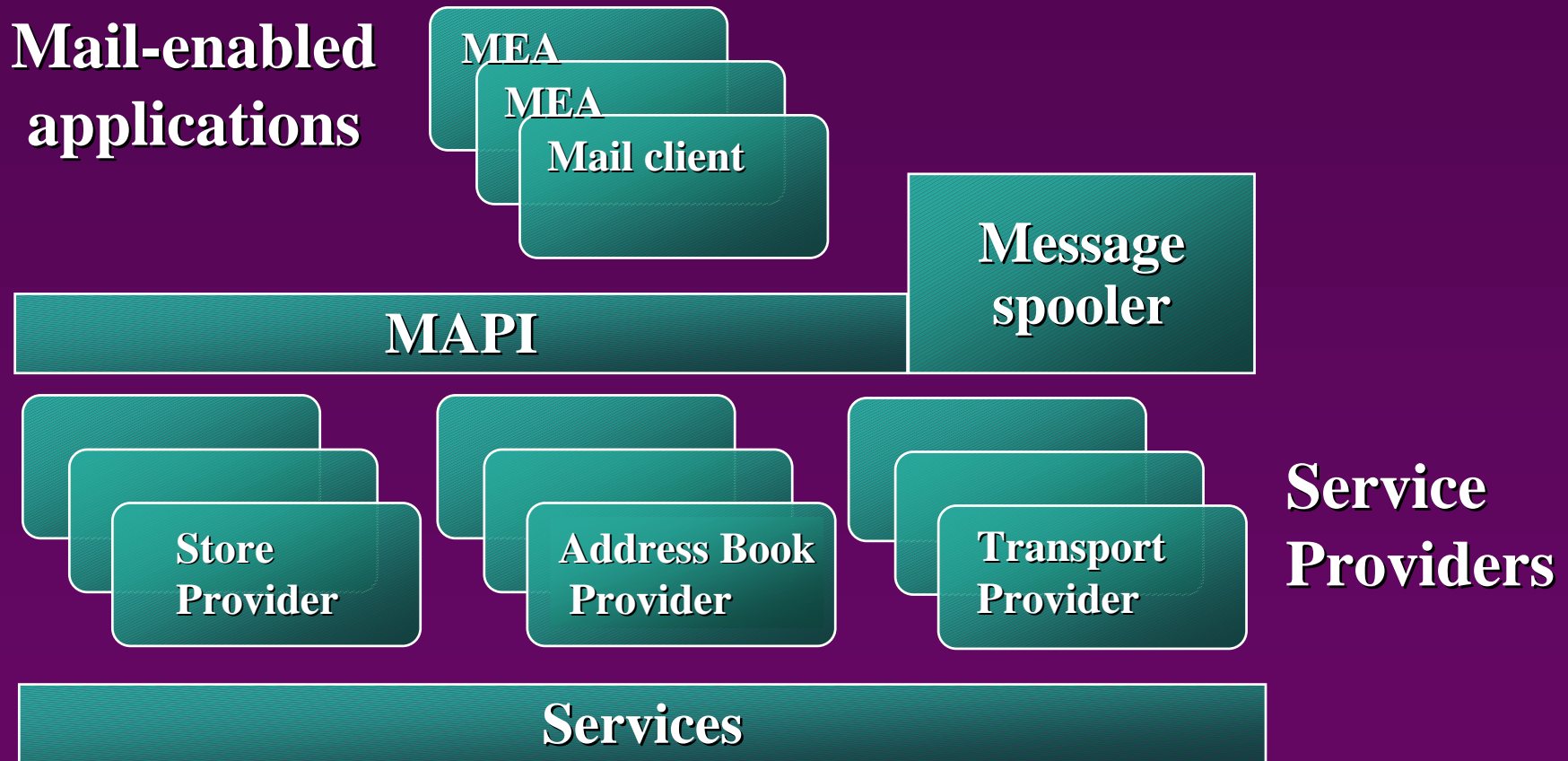
Win32 Thread B

Win32 Thread C

Great Connectivity
Enterprise client

- ◆ **Universal network client**
  - ➢ **Easy to connect**
  - ➢ **Easy to use**
  - ➢ **Easy to administer**
- ◆ **Built-in messaging**
  - ➢ **Electronic mail client**
  - ➢ **Fax transport**
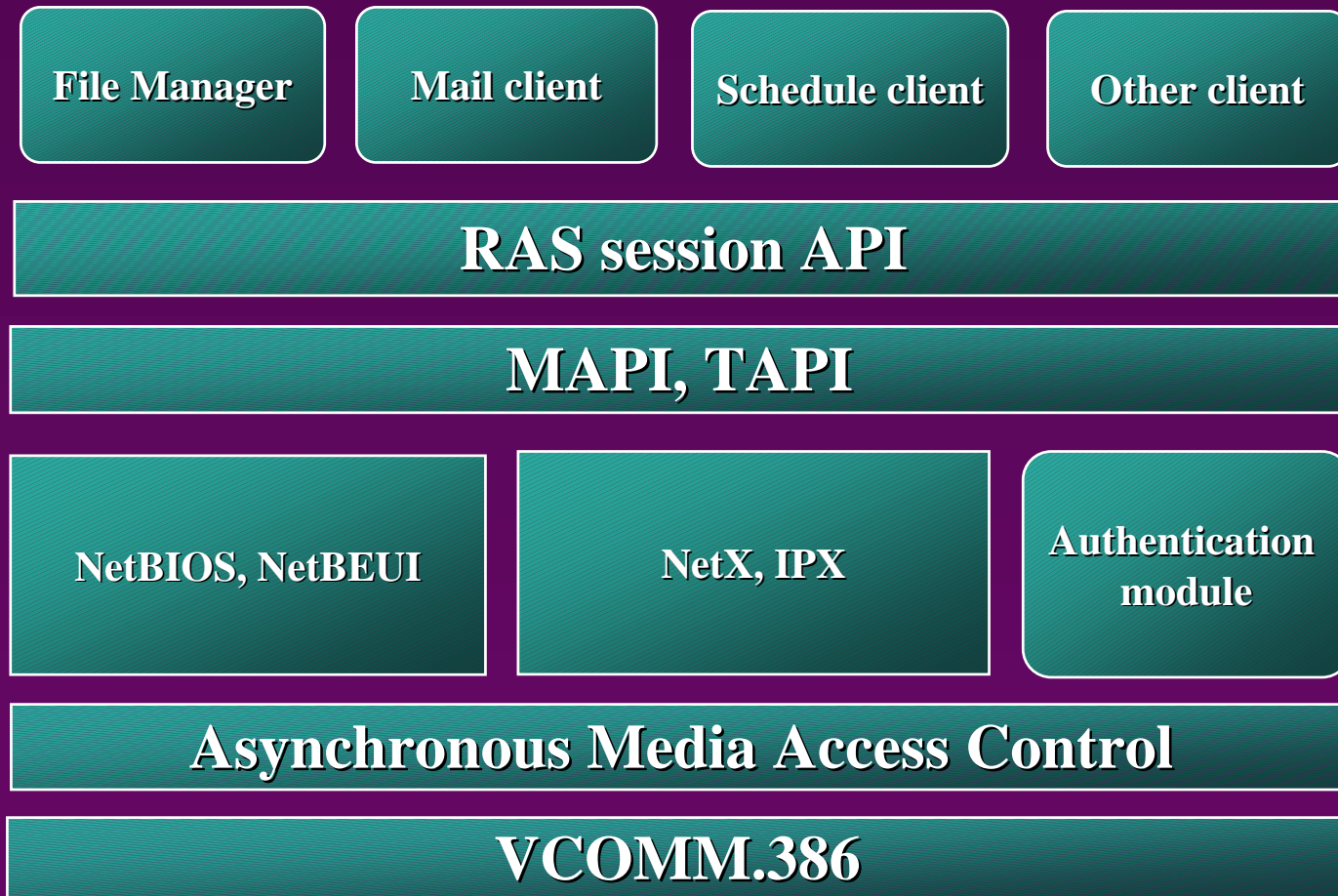
Great Connectivity
Messaging architecture

Mail-enabled applications

MEA

MEA

Mail client

Message spooler

MAPI

Store Provider

Address Book Provider

Transport Provider

Service Providers

Services

Great Connectivity
Remote services

- ◆ **Remote network access**

- ◆ **Remote electronic mail**

- ◆ **File synchronization**

Great Connectivity

RAS architecture

File Manager	Mail client	Schedule client	Other client

RAS session API

MAPI, TAPI

NetBIOS, NetBEUI	NetX, IPX	Authentication module

Asynchronous Media Access Control

VCOMM.386

Great Windows-Based Applications

- ◆ **32 bits - Win32**
- ◆ **OLE 2.0**
  - ➢ **Container or object**
  - ➢ **Drag-and-Drop feature**
  - ➢ **Compound Files with summary information**
  - ➢ **Automation**
- ◆ **UI Style Guidelines**
  - ➢ **Long filenames, UNC support, register 16x16 icons, 3-D look, common dialogs, hide .3 extensions, support context menu on right mouse button click**
- ◆ **Setup: support Uninstall, use registry**
- ◆ **Plug and Play: messages**
- ◆ **Simple mail-enabled (CMC)**
- ◆ **Test and run on Windows NT "Daytona"**

Technical Strategy

◆ **Port your existing applications to Win32**

◆ **Attend:**

Class: WS 333
"The Future of Windows:
Win32 - On The Road to Cairo
and Chicago"

Date: Mar 16, 1994

Time: 1:00-3:00pm

Room: J3 CC

◆ **Test applications on all platforms**

Questions?