

The background of the slide is a collage. At the top center is a purple Apple II computer with a white Apple logo on its front. To the right is a green vintage typewriter. The background is also filled with faint, glowing blue and yellow lines that resemble orbits or data paths. The text 'Worldwide Developers Conference' is centered over the image. 'Worldwide' and 'Conference' are in a gold, serif font with a 3D effect. 'Developers' is in a white, serif font and is enclosed within a white rectangular border.

# Worldwide Developers Conference





**David Krathwohl**

*Vice President,  
Developer Relations*





**Dr. Gil Amelio**

*Chairman, CEO  
Apple Computer, Inc.*

# Putting Apple's House in Order

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*Returning to profitability and growth*





# Putting Apple's House in Order

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## *Returning to profitability and growth*

- Improved cash position:
  - \$1.4 billion after NeXT acquisition



# Putting Apple's House in Order

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- Goal: Return to sustainable profitability by next fiscal quarter (September)





# Putting Apple's House in Order

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- Lowered break-even point



# Putting Apple's House in Order

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- Lowered break-even point
- Downsized company





# Putting Apple's House in Order

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## *Returning to profitability and growth*

- Improved cash position:
  - \$1.4 billion after NeXT acquisition
- Goal: Return to sustainable profitability by next fiscal quarter (September)
- Lowered break-even point
- Downsized company
- Sharp focus on core business



# Addressing Customer Concerns

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# Addressing Customer Concerns

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- Quality organization in place



# Addressing Customer Concerns

---

- **Quality organization in place**
- **Minimum DRAM configurations raised to 16 MB**





# Addressing Customer Concerns

---

- **Quality organization in place**
- **Minimum DRAM configurations raised to 16 MB**
- **Consolidating product line**
  - All desktops now under Power Macintosh brand



# 1997: Year of the Product



# 1997: Year of the Product

## *New: Macintosh PowerBook 2400*

- 4.4 pounds
- PowerPC 603e (180 MHz)
- 10.4-inch active-matrix screen
- 256K level-2 cache
- 2 PC-card slots
- 16 MB standard  
(up to 48 MB)
- 1.2 GB hard disk





# 1997: Year of the Product

---

*On the way...*

- Hardware advances
- Mac OS 8
- Rhapsody (Developer Release)



**How can Macintosh  
succeed in a world  
dominated by the  
Wintel standard?**



# Apple Leadership

## *Digital content creation*



80% Color  
Publishing

A 3D pie chart with a purple base and a red-orange top section representing 80% of the total.



64%  
Web Design

A 3D pie chart with a purple base and a yellow-orange top section representing 64% of the total.



54%  
CD Titles

A 3D pie chart with a purple base and a teal top section representing 54% of the total.



Sources: Griffin Dix, Dataquest, QED



# Apple Leadership

*Scientific and Technical markets*



A pie chart representing market share for Chemists. It is divided into two segments: a large yellow segment and a smaller purple segment. The text '45% Chemists' is centered over the purple segment.

45%  
Chemists



A pie chart representing market share for Architects. It is divided into two segments: a large teal segment and a smaller purple segment. The text '40% Architects' is centered over the purple segment.

40%  
Architects



A pie chart representing market share for Hospitals in Japan. It is divided into two segments: a large purple segment and a smaller red segment. The text '85% Hospitals (Japan)' is centered over the purple segment.

85% Hospitals  
(Japan)



# Macintosh Is the Market Leader in K-12 Education

---

- Recent wins bolster #1 position



# Macintosh Is the Market Leader in K-12 Education

---

- Recent wins bolster #1 position
  - Northshore School District
    - \$4 Million



# Macintosh Is the Market Leader in K-12 Education

---

- Recent wins bolster #1 position
  - Northshore School District
    - \$4 Million
  - Spring Branch Independent School District
    - \$1.6 Million





# Macintosh Is the Market Leader in K-12 Education

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- Recent wins bolster #1 position
  - Northshore School District
    - \$4 Million
  - Spring Branch Independent School District
    - \$1.6 Million
  - Broward County School District
    - \$1.5 Million



How can Macintosh  
succeed in a world  
dominated by the  
Wintel standard?






*Does*

How ~~can~~ Macintosh  
succeed in a world  
dominated by the  
Wintel standard?





What can we do  
to accelerate  
and expand our  
success?





# Macintosh Success Factors

---

*Best-of-breed solutions*



# Macintosh Success Factors

## *Best-of-breed solutions*

### Developers Provide

- Market knowledge
- Product insight
- Entrepreneurial energy



# Macintosh Success Factors

## *Best-of-breed solutions*

### Developers Provide

- Market knowledge
- Product insight
- Entrepreneurial energy

### Apple's Direction

- New development platform:
  - Better apps faster



# Amplifying the Power of Your Applications

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*Quantitative factors*





# Amplifying the Power of Your Applications

---

## *Quantitative factors*

- Mac outperforms Pentium-based systems



# Amplifying the Power of Your Applications

---

## *Quantitative factors*

- Mac outperforms Pentium-based systems
- Higher throughput = higher ROI



# Amplifying the Power of Your Applications

---

## *Quantitative factors*

- Mac outperforms Pentium-based systems
- Higher throughput = higher ROI
- The Rhapsody performance boost
  - Symmetric multi-processing
  - Multi-threading
  - Protected memory
  - Advanced I/O



# Boosting Human Productivity

---

*Performance + Ease-of-Use*





# Boosting Human Productivity

---

*Performance + Ease-of-Use*

- Delightful user experience



# Boosting Human Productivity

---

## *Performance + Ease-of-Use*

- Delightful user experience
- Focus on work, not the computer
  - Apps work together
  - Consistent user interface
  - True plug-and-play



# Amplifying Adobe Photoshop

---

## *The Macintosh Advantage*

- Runs faster
- Accelerators
- Plug-ins (commercial and Shareware)



# Amplifying QuarkXPress

---

## *The Macintosh Advantage*

- **Xtensions**
- **Scripting (AppleScript, Frontier)**
- **Apple publishing environment**
  - Color synchronization
  - Font management
  - QTML
  - Page to Web





Today's differentiation  
is not enough to win in  
the broader market...



**What can we do to  
accelerate and expand  
our success?**



# Raising Perceived Differentiation

---

*Focus on Distinctly Superior User Values (DSUV)*



# Raising Perceived Differentiation

---

*Focus on Distinctly Superior User Values (DSUV)*

- Compelling user experience





# Raising Perceived Differentiation

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*Focus on Distinctly Superior User Values (DSUV)*

- Compelling user experience
- Outstanding performance



# Raising Perceived Differentiation

---

*Focus on Distinctly Superior User Values (DSUV)*

- Compelling user experience
- Outstanding performance
- Seamless connectivity



# Raising Perceived Differentiation

---

*Focus on Distinctly Superior User Values (DSUV)*

- Compelling user experience
- Outstanding performance
- Seamless connectivity
- Cross-platform compatibility



# Raising Perceived Differentiation

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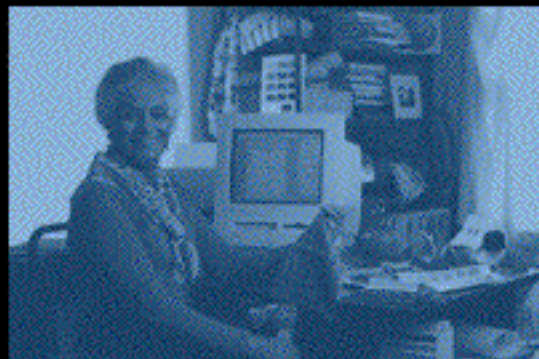
*Focus on Distinctly Superior User Values (DSUV)*

- Compelling user experience
- Outstanding performance
- Seamless connectivity
- Cross-platform compatibility
- Breakthrough industrial design





# What Our Customers Value



# Apple Customers

*87% Repurchase Index*



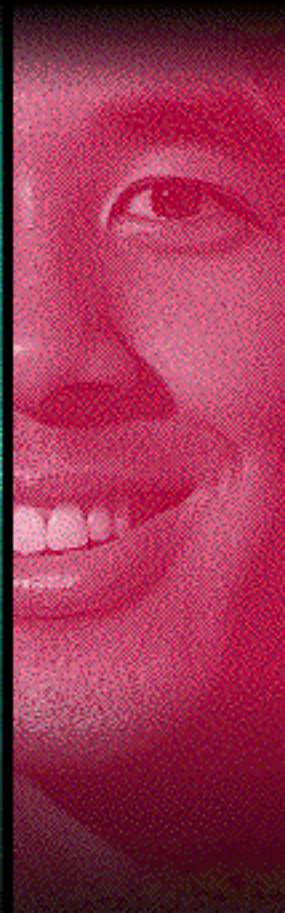
87%





# "Autumn Upgrade Windfall"

— *Dataquest*



To surpass the highest  
expectations of people who  
love and rely on the Mac





**How can Macintosh  
succeed in a world  
dominated by the  
Wintel standard?**





# Bridgeware

Macintosh

Windows





# Bridgeware



Macintosh

Windows

Internet  
Java





# Bridgeware



Macintosh

Windows

Internet  
Java

QuickTime Media Layer (QTML)





# Bridgeware

Macintosh

Windows

Apple Development Environment



Yellow Box



# Yellow Box Delivers

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# Yellow Box Delivers

---

- Higher performance



# Yellow Box Delivers

---

- Higher performance
- Rock solid stability



# Yellow Box Delivers

---

- **Higher performance**
- **Rock solid stability**
- **Most efficient development platform**



# Yellow Box Delivers

---

- Higher performance
- Rock solid stability
- Most efficient development platform
- Excellent Java integration



# Yellow Box Delivers

---

- **Higher performance**
- **Rock solid stability**
- **Most efficient development platform**
- **Excellent Java integration**
- **Cross-platform development**





# Yellow Box Delivers

---

- Higher performance
- Rock solid stability
- Most efficient development platform
- Excellent Java integration
- Cross-platform development

*Code Once  
Deliver on Multiple Platforms*



# Rhapsody Architecture

Advanced Mac Look and Feel

Mac OS

Yellow Box  
OPENSTEP based

Java

Core OS

PowerPC



# Rhapsody Architecture

Advanced Mac Look and Feel

Mac OS

Yellow Box  
OPENSTEP based

Java

Core OS

PowerPC



# Development Platform

**Development  
Platform**

**User  
Environments**



A thick orange arrow originates from the right side of the yellow box, extends horizontally to the right, then turns 90 degrees upwards, and finally turns 90 degrees to the right again, pointing towards the "Rhapsody" box.

**Rhapsody**





# Development Platform

**Development  
Platform**



**User  
Environments**

**Rhapsody**

**Windows 95**

**Windows NT**





# Development Platform

**Development  
Platform**

**Yellow  
Box**

**User  
Environments**

**Rhapsody**

**Windows 95**

**Windows NT**

**Rhapsody  
for Intel**



# Development Platform

**Development  
Platform**

**Yellow  
Box**

**User  
Environments**

**Rhapsody**

**Windows 95**

**Windows NT**

**Rhapsody  
for Intel**

**...and more!**



# Leading Java Implementation



- **100% Pure Java**
- **Access Yellow Box APIs from Java**
- **Deliver robust, media-rich apps**



# Rhapsody Architecture

Advanced Mac Look and Feel

Mac OS

Yellow Box  
OPENSTEP based

Java

Core OS

PowerPC





# Rhapsody Architecture

Advanced Mac Look and Feel

Mac OS

Yellow Box  
OPENSTEP based

Java

Core OS

PowerPC



# Continuing Development of Mac OS



**Mac OS 8  
(Tempo)**

**July  
1997**

Rhapsody  
Developer  
Release

**Allegro**

**Summer  
1998**

Rhapsody  
Premier  
Release

**Sonata**

**Summer  
1999**

Rhapsody  
Unified  
Release



**“The multi-threaded Finder,  
new interface features, and  
improved speed make my  
computer much more usable.**

**I haven’t experienced a crash  
in ages, it’s like a whole new  
machine.”**

---

**—Ishir Bhan, Harvard Medical School**



# Continuing Development of Mac OS



**Mac OS 8  
(Tempo)**

**July  
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Rhapsody  
Premier  
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**Sonata**

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1999**

Rhapsody  
Unified  
Release





# Dual OS Strategy

---

*Maximize your opportunities*



# Dual OS Strategy

---

*Maximize your opportunities*

- Mac OS continues for years to come



# Dual OS Strategy

---

*Maximize your opportunities*

- Mac OS continues for years to come
- Rhapsody on the horizon



# Dual OS Strategy

---

## *Maximize your opportunities*

- Mac OS continues for years to come
- Rhapsody on the horizon
- Customers can migrate to Rhapsody at their own speed





# Rhapsody Offers Customers...

---



# Rhapsody Offers Customers...

---

- **Stability**



# Rhapsody Offers Customers...

---

- **Stability**
- **Performance**



# Rhapsody Offers Customers...

---

- **Stability**
- **Performance**
- **Faithful screen imaging**





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- **Stability**
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- **Rapid application development**



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- **Stability**
- **Performance**
- **Faithful screen imaging**
- **Rapid application development**
- **Internet/intranet support**



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- **Stability**
- **Performance**
- **Faithful screen imaging**
- **Rapid application development**
- **Internet/intranet support**
- **State-of-the-art multimedia**



# Rhapsody Offers Customers...

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- **Stability**
- **Performance**
- **Faithful screen imaging**
- **Rapid application development**
- **Internet/intranet support**
- **State-of-the-art multimedia**
- **Ease-of-use**





# Rhapsody Offers Customers...

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- **Stability**
- **Performance**
- **Faithful screen imaging**
- **Rapid application development**
- **Internet/intranet support**
- **State-of-the-art multimedia**
- **Ease-of-use**
- **Dynamic Web applications**



# Dual OS Roadmap

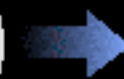
1997



Mac OS 7.6



Mac OS 8



1998



Allegro



WWDC

Rhapsody  
Developer  
Release



Rhapsody  
Premier  
Release



Rhapsody  
Unified  
Release



# Winning Strategy

---



# Winning Strategy

---

- For Developers:





# Winning Strategy

---

- **For Developers:**
  - Develop best-of-breed apps



# Winning Strategy

---

- **For Developers:**
  - Develop best-of-breed apps
  - Develop them faster



# Winning Strategy

---

- **For Developers:**
  - Develop best-of-breed apps
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# Winning Strategy

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- **For Developers:**
  - Develop best-of-breed apps
  - Develop them faster
  - Deploy them on multiple platforms
- **For Customers:**





# Winning Strategy

---

- **For Developers:**
  - Develop best-of-breed apps
  - Develop them faster
  - Deploy them on multiple platforms
- **For Customers:**
  - Greater stability and performance



# Winning Strategy

---

- **For Developers:**
  - Develop best-of-breed apps
  - Develop them faster
  - Deploy them on multiple platforms
- **For Customers:**
  - Greater stability and performance
  - Superior imaging model



# Winning Strategy

---

- **For Developers:**
  - Develop best-of-breed apps
  - Develop them faster
  - Deploy them on multiple platforms
- **For Customers:**
  - Greater stability and performance
  - Superior imaging model
  - Lower cost of ownership



# Winning Strategy

---

- **For Developers:**
  - Develop best-of-breed apps
  - Develop them faster
  - Deploy them on multiple platforms
- **For Customers:**
  - Greater stability and performance
  - Superior imaging model
  - Lower cost of ownership
  - New generation of apps







# Hardware Directions

*Jon Rubinstein*

**Sr. Vice President,  
Hardware Engineering**

# The Eternal Question



Mac<sup>TM</sup> OS





# The Answer...Yes!

*Apple is a Systems Company*



Mac<sup>TM</sup> OS



# My Goal

---

*To Build the Very  
Best Computers  
in the World*

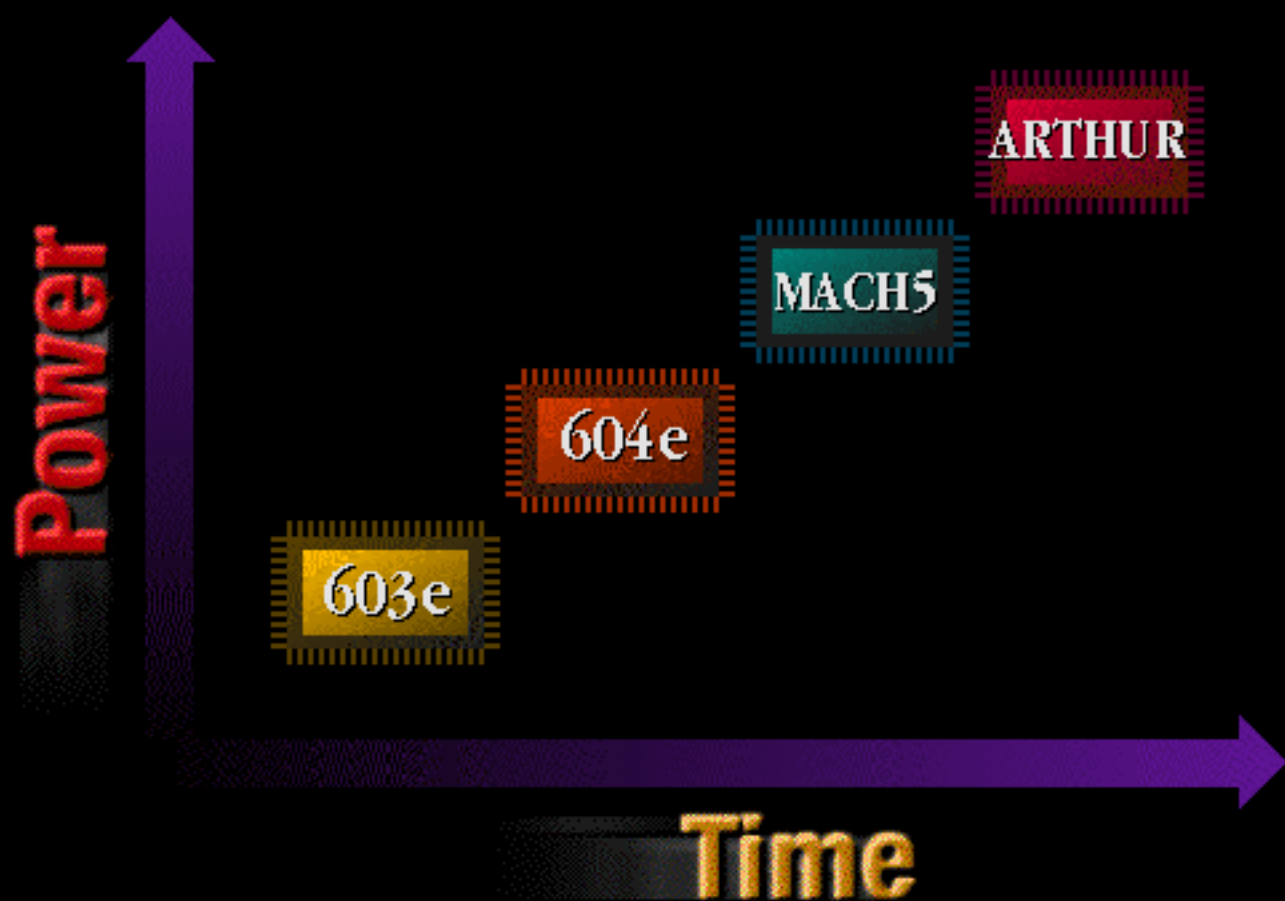




# Hardware Wins



# Performance



*Where do you want to*  
**go?**  
*tomorrow*





# Agenda

---

- Objective
- Strategic Principles
- Initiatives





# Objective—We Want to Lead

---

To surpass the highest  
expectations of people who  
love and rely on the Mac

*Designing for our customers*



# Strategic Principles

---

# Simplify



# Strategic Principles

---

Simplify

Integrate



# Strategic Principles

---

Simplify

Focus

Integrate





# Strategic Principles

---

Simplify

Focus

Integrate

Partner



# Strategic Principles

---

Simplify

Focus

Integrate

EXECUTE

Partner



# Initiatives

---

## Performance



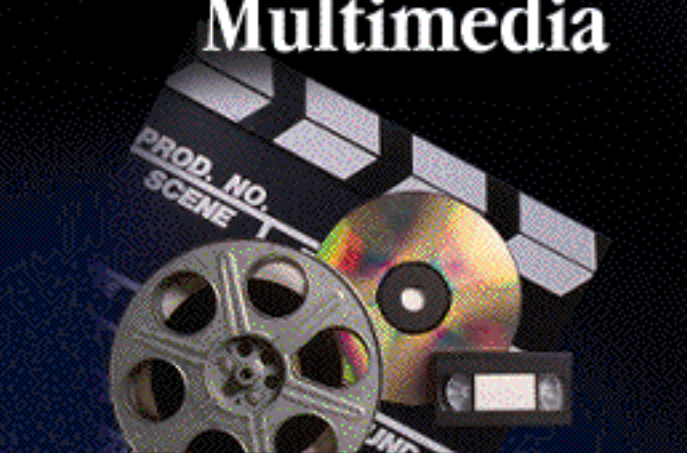
# Initiatives

---

## Performance



## Multimedia





# Initiatives

## Performance



## Multimedia



## Communications



# Initiatives

Performance



Multimedia



Communications



Design

FORM &  
function







**Avadis Tevanian Jr.**

*Senior Vice President  
Software Engineering*

# Me and Macintosh

---





# The First Three Months

---





# IMF—It's about Teamwork

---



# Why I'm Optimistic

---

- Opportunities outside of Apple
- Our recent success
- Our progress





# Apple's Internet Strengths

- Lots of Mac users
- Traditional publishing
- Strong content creation base 64%
- Multimedia leadership
- Dynamic web content



# Internet Opportunities

---

- Platform neutral market
- New application paradigm
- Renewed interest in maintenance cost



# Java

---



# Apple's Success

- Recent product successes: 7.6, 7.6.1
- Tempo on schedule
- Clear plans; focused organization
- We're making continuous progress





# A Solid Base



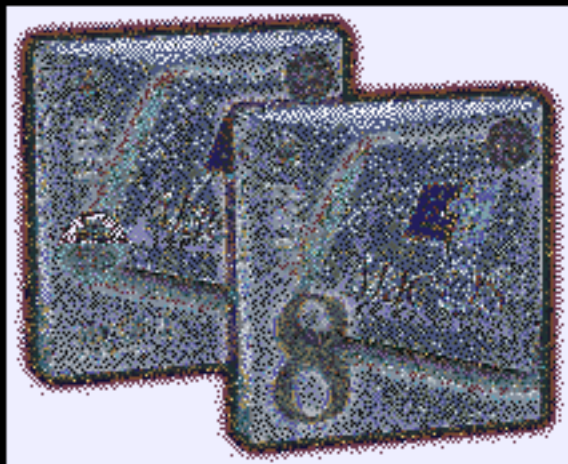
# Mac OS Roadmap

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# Mac OS Roadmap

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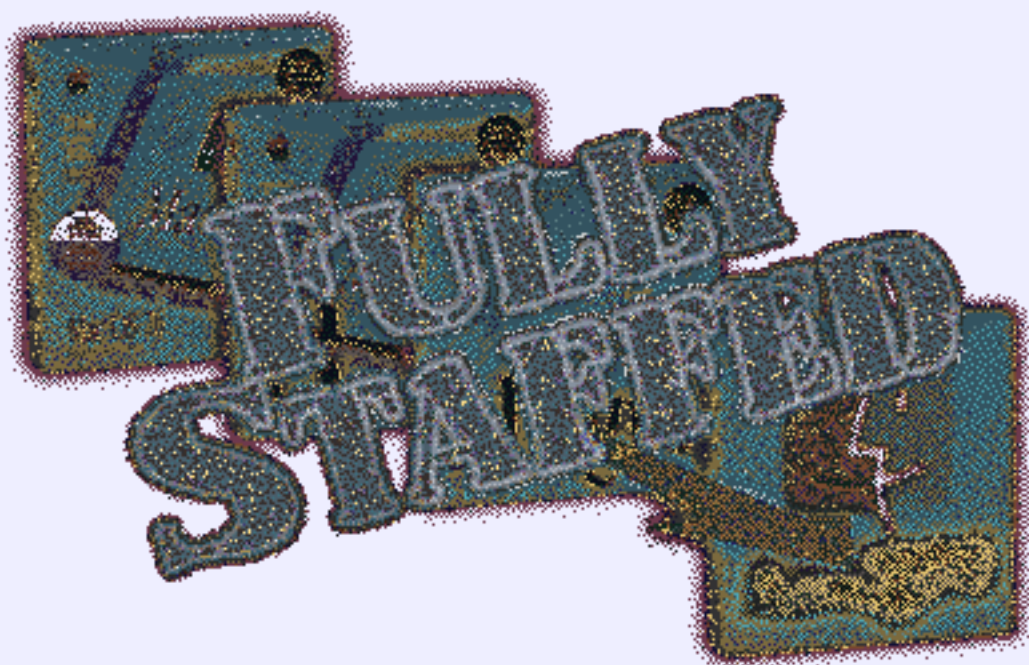
# Mac OS Roadmap

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# Mac OS Roadmap



# Mac OS 8

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- **User experience**
- **Internet services**
- **Performance**



Mac<sup>™</sup>OS







Mac OS 8

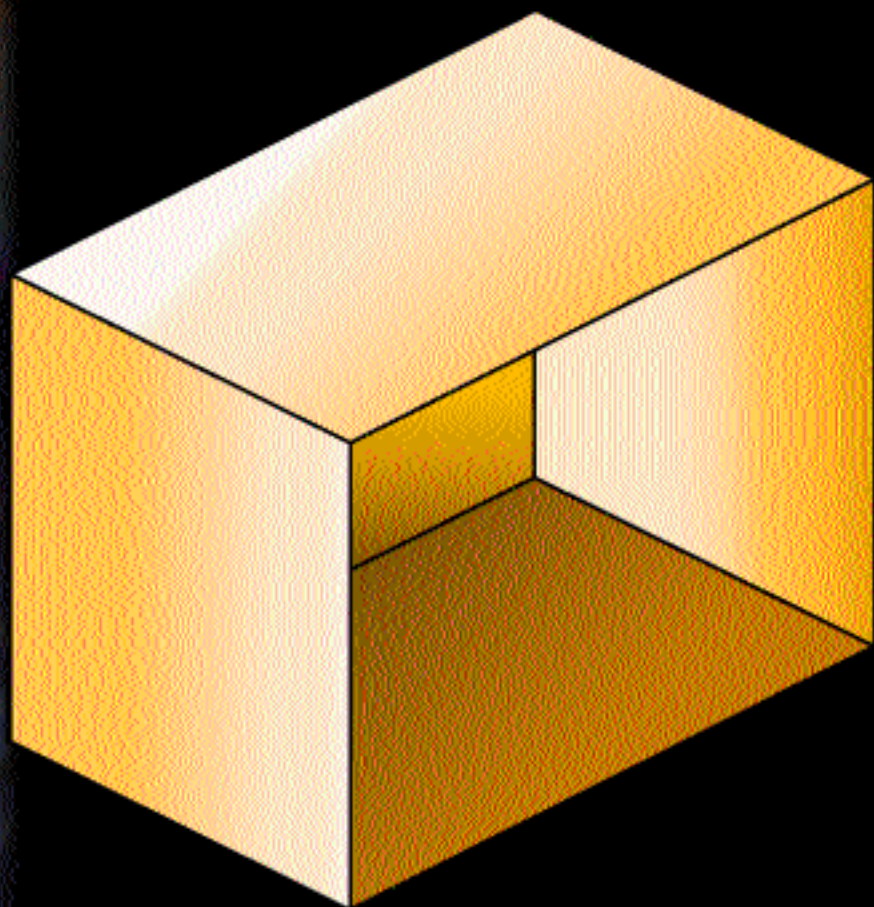
Demo

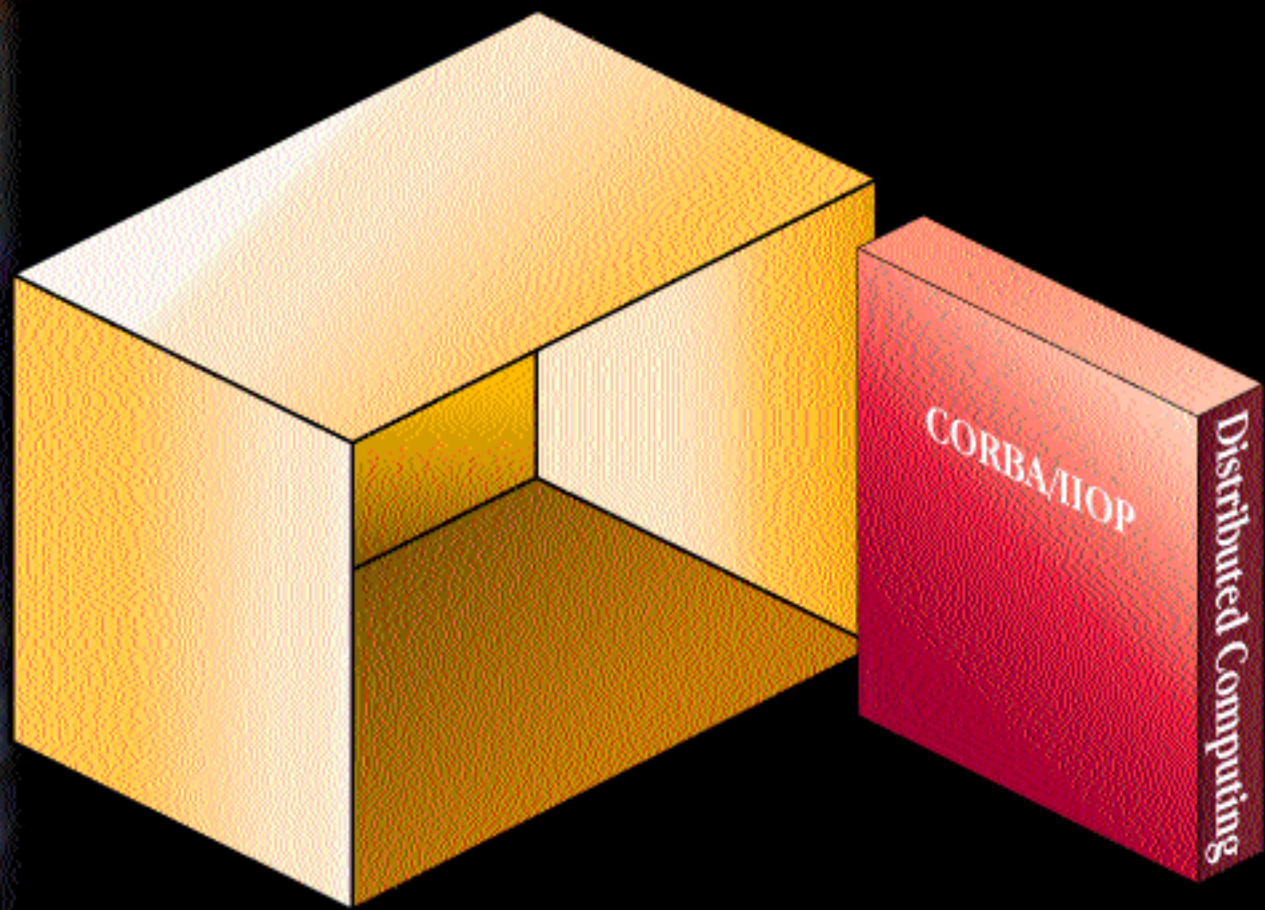
# The Developer Proposition

- **Volume/Cross-platform**
- **High quality APIs and Tools**

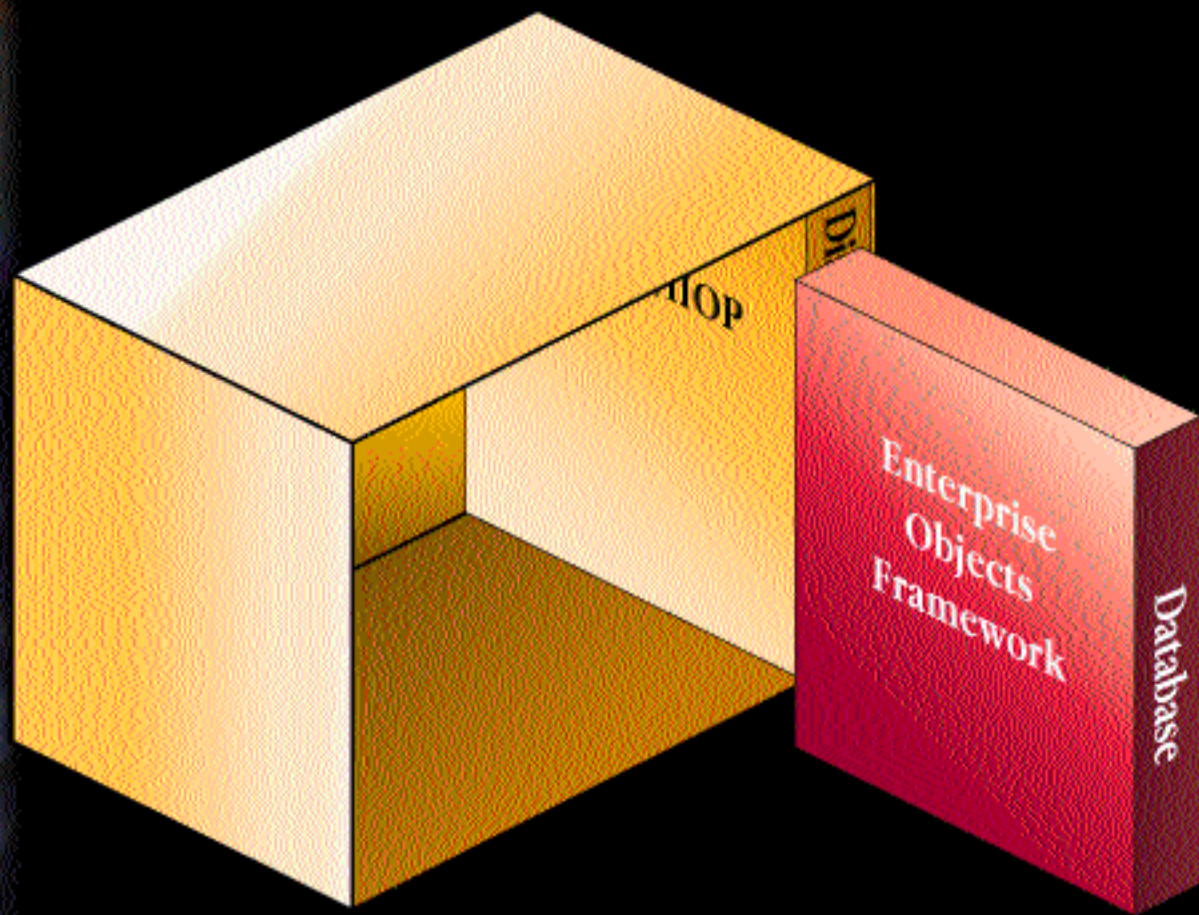


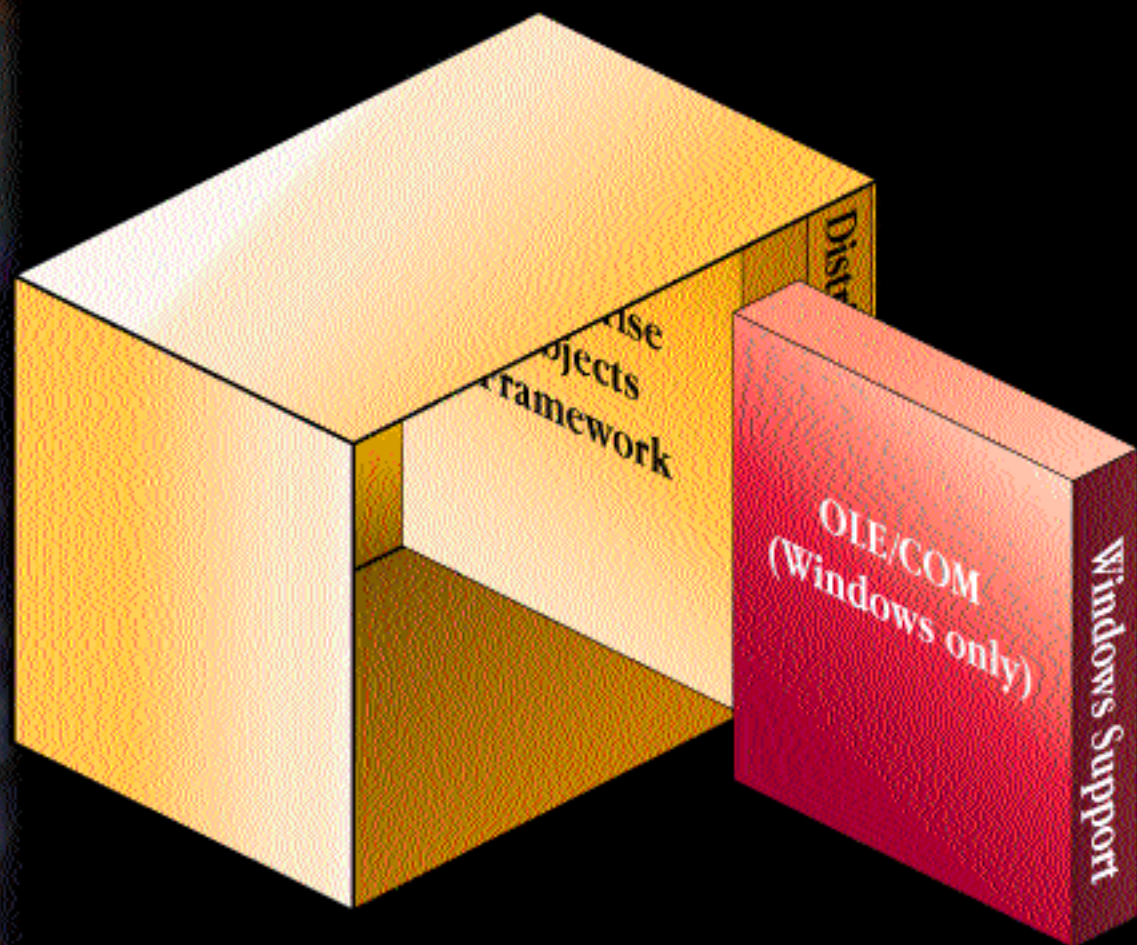




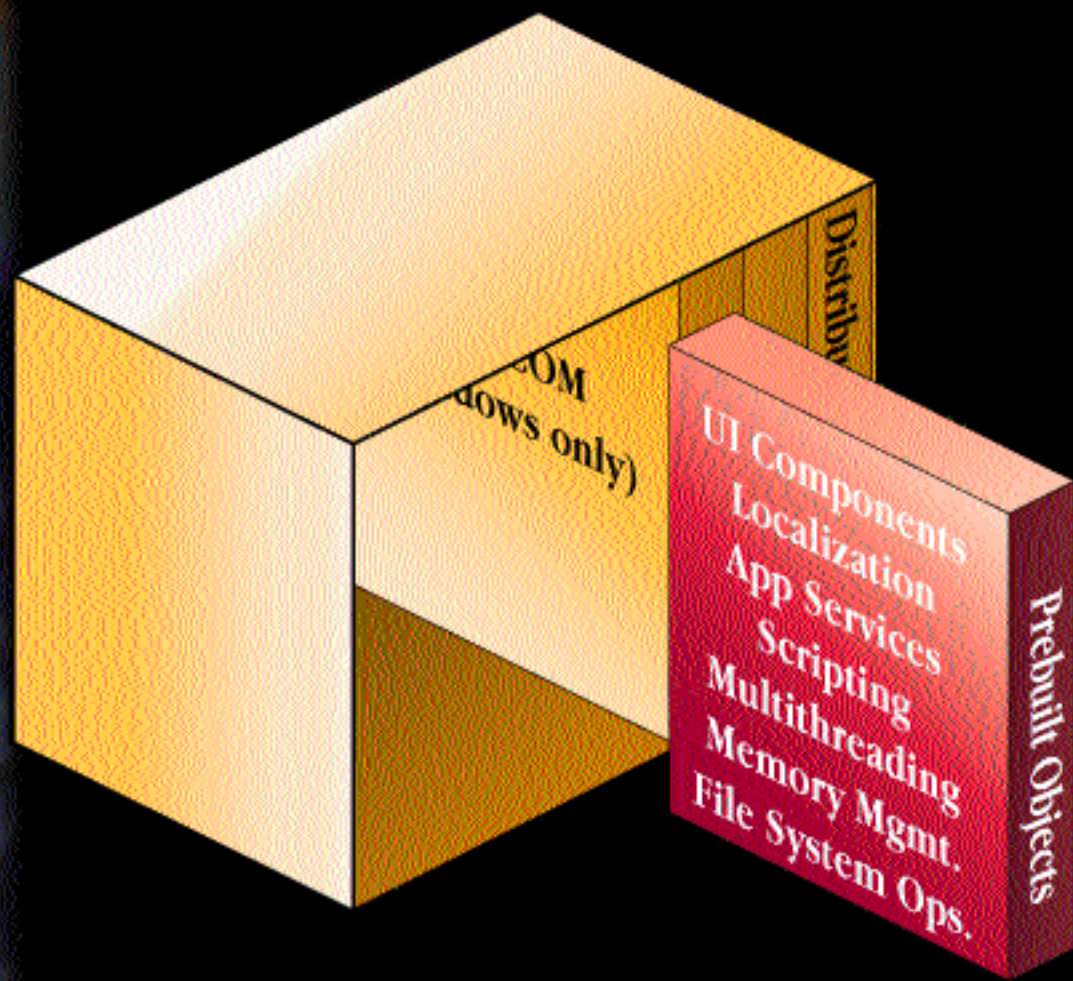


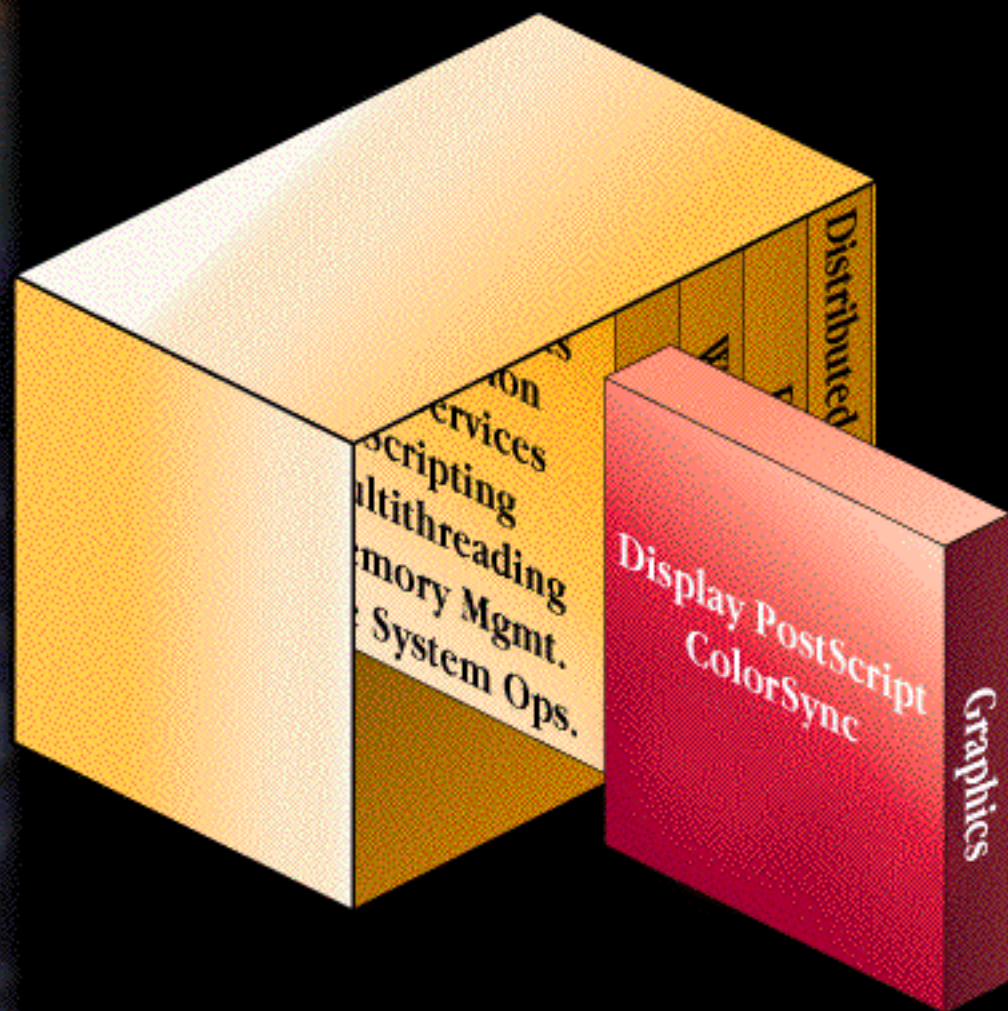




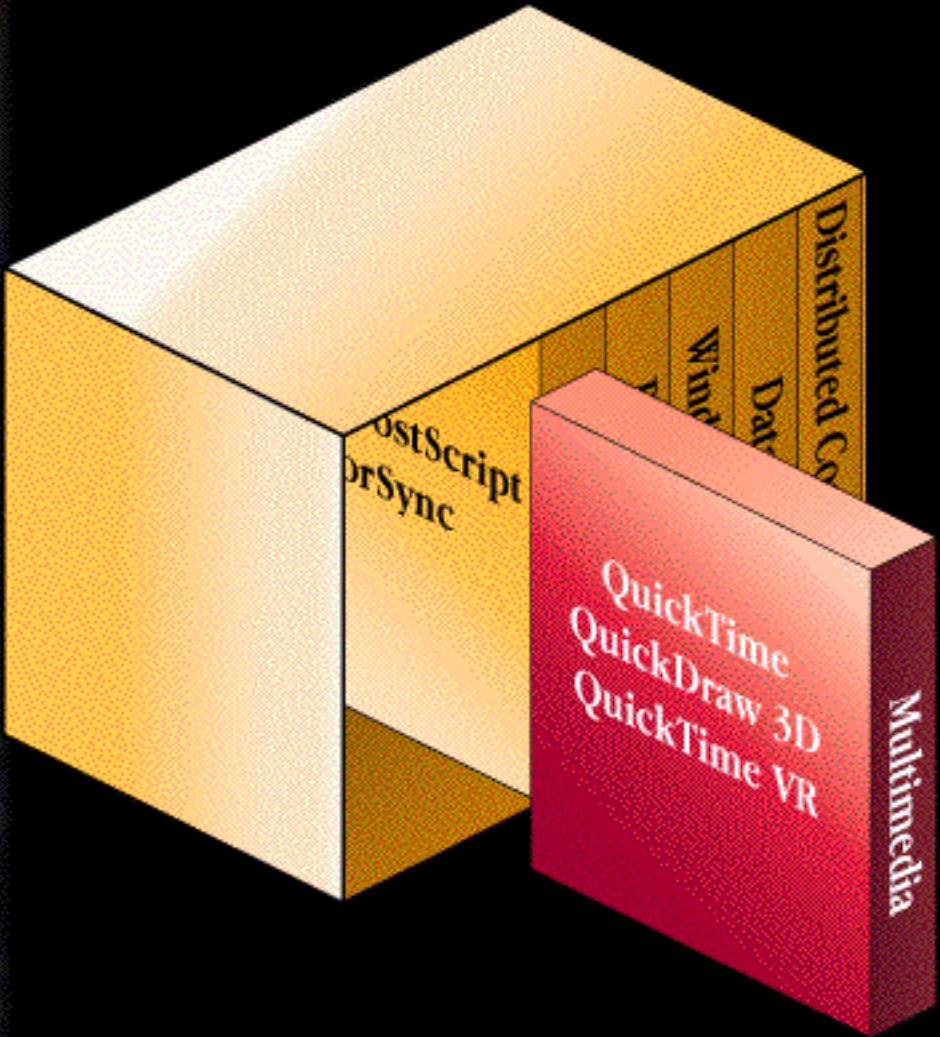












# QuickTime 3.0

*Apple's first successful cross-platform development environment bridgware*

- **Universal container**
  - Cross-platform authoring and playback
  - Scalable open architecture
- **Wide acceptance**
  - Industry standard for digital media creation



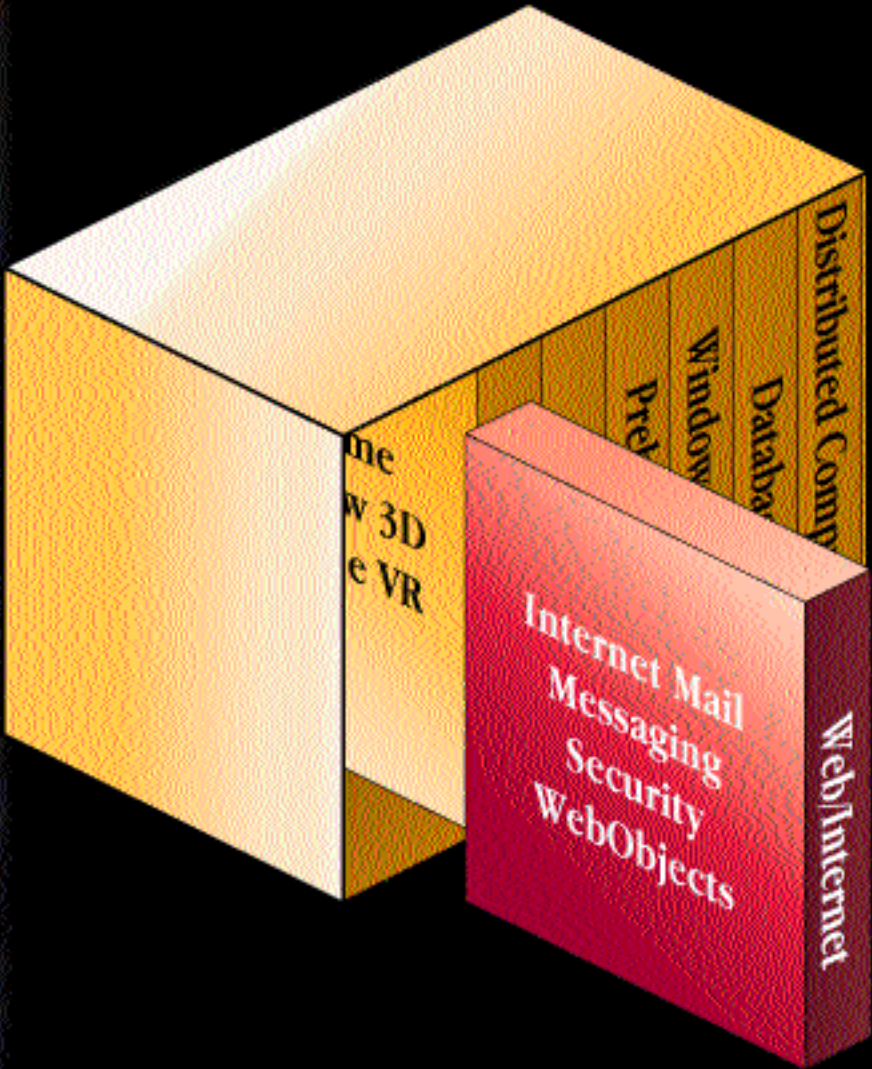


# New Features in 3.0

---

- **Professional Video**
  - Firewire/DV support
  - Effects and Transitions
  - New file formats: AVID OMF
- **Internet Content**
  - Low bit-rate video
  - Web based animation and interaction





# WebObjects

- Publish dynamic information
- Develop/Deploy cross-platform
- Use any data source
- Develop with Java today
- New support for Acrobat FDF/PDF



# Others Demo. We Deploy.

DELL®

cyberslice

KN  
ENERGY

Club Med



X  
ension.com

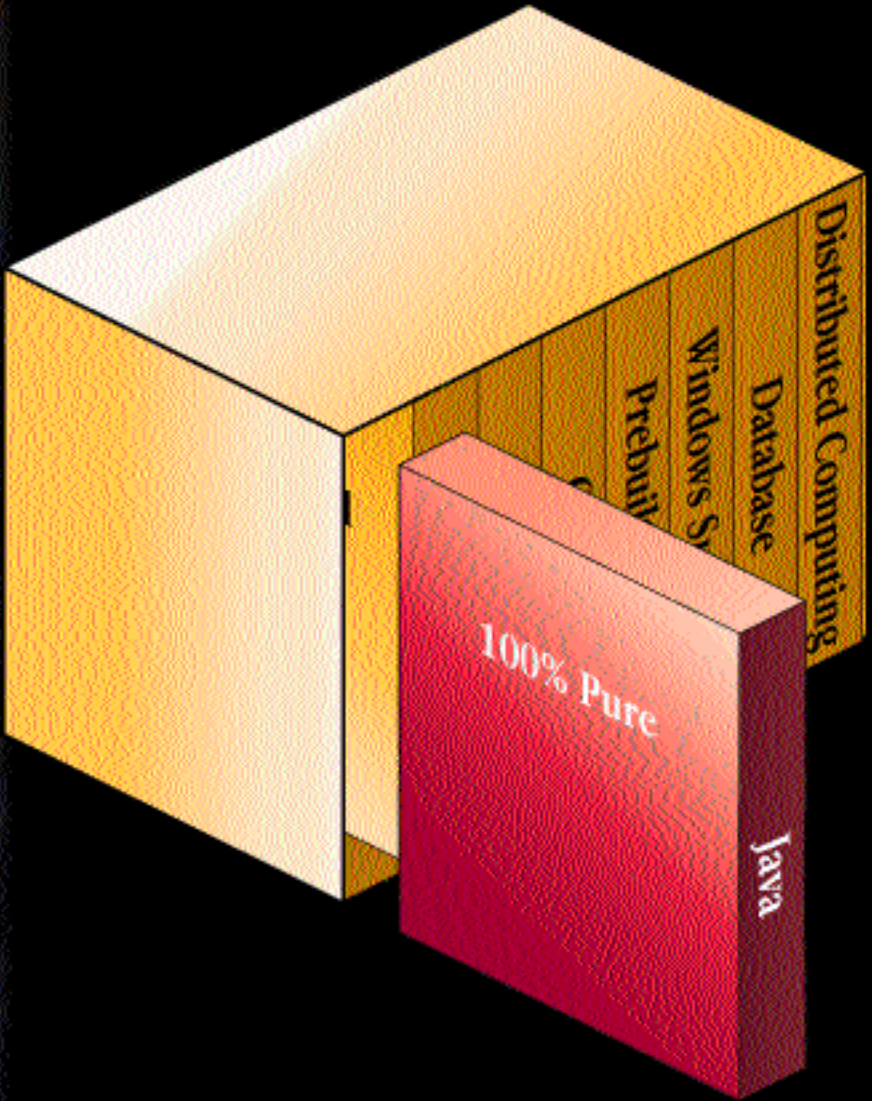
Sanborns

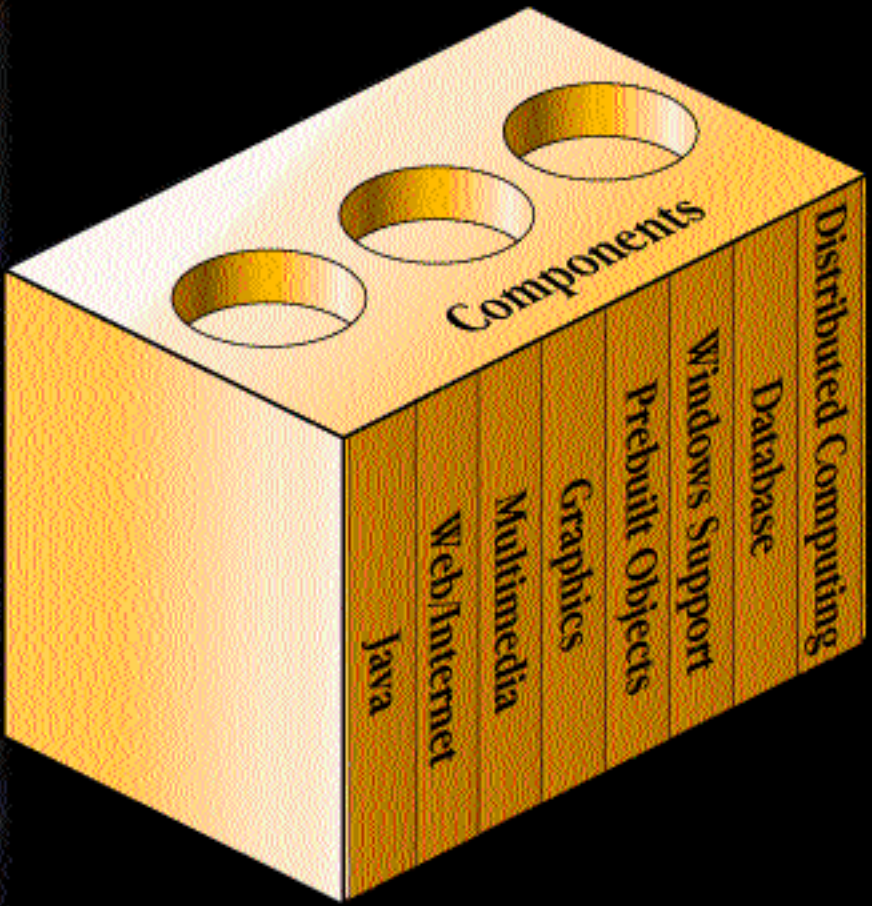


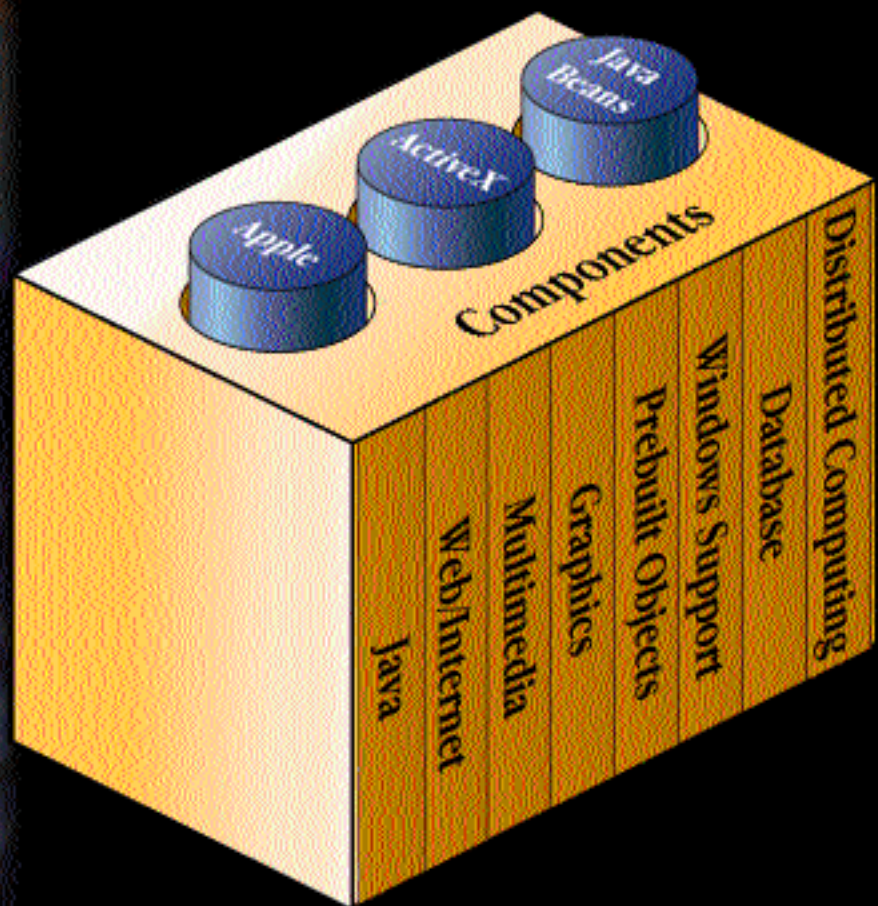
THE  
SHARPER  
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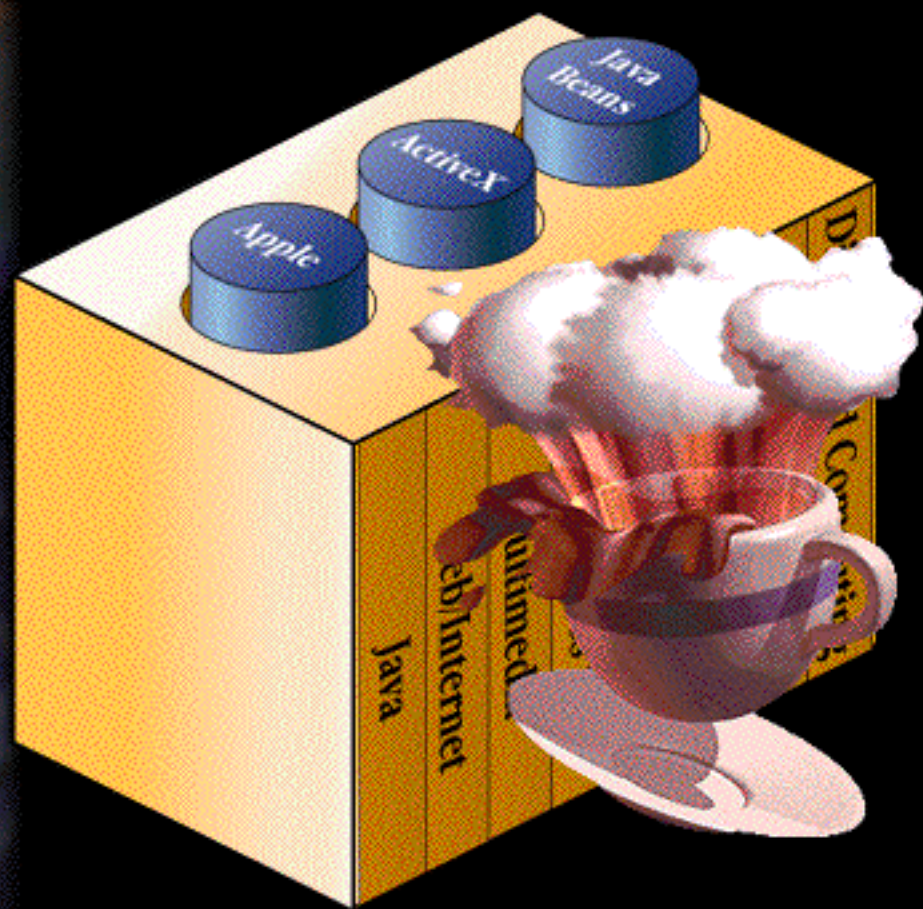




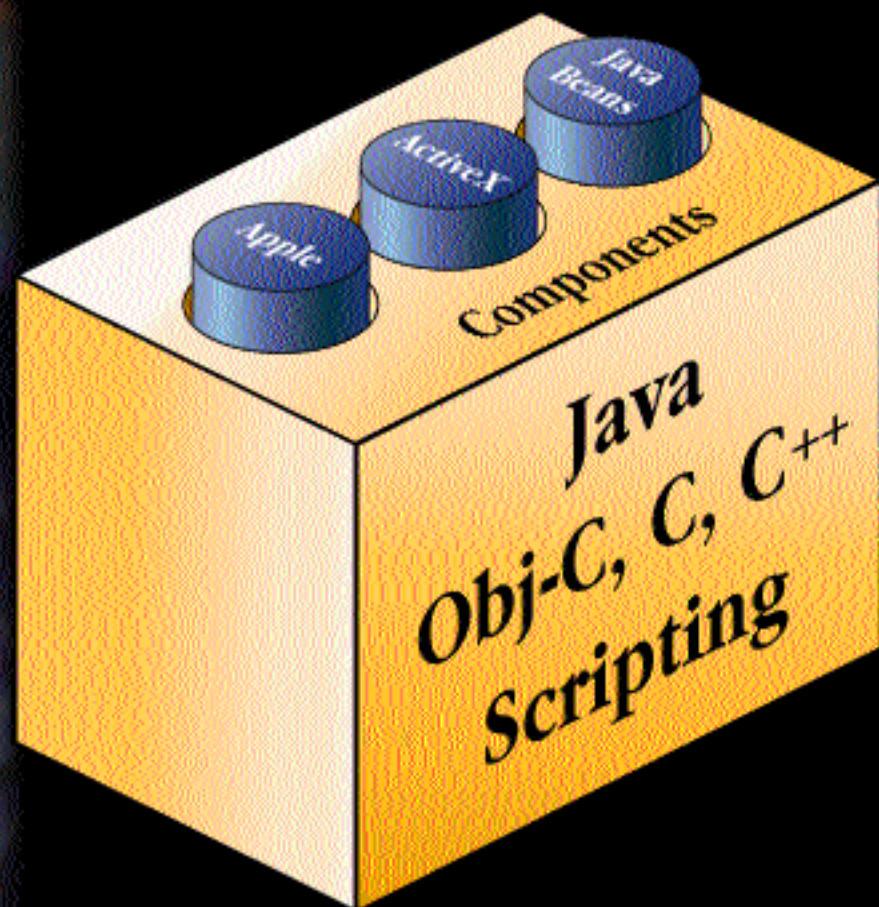










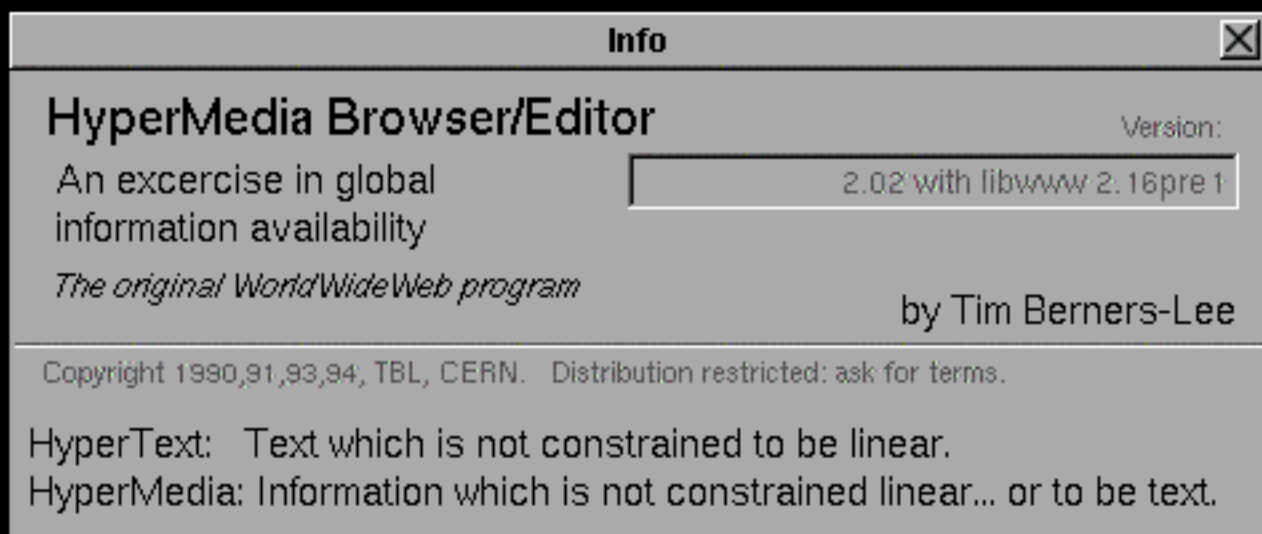




Java Integration

Demo

# The First Web Browser







**Cross-Platform  
APIs and Tools**

**Demo**



# Developer Benefits

- Best of breed apps
- Shorter development cycle
- Enable full promise of Java
- Deliver solutions across multiple platforms



# Getting There

- Metrowerks Latitude
- Helps Mac OS developers make the move to Yellow



# Deployment of Yellow Box

---





# Rhapsody

# PowerPC

Advanced Mac Look and Feel

Mac OS

Yellow Box  
OPENSTEP based

Java

Core OS

PowerPC





# Rhapsody

# PowerPC

Advanced Mac Look and Feel

Mac OS

Yellow Box

STEP based

Jay

Core OS

PowerPC



# Rhapsody for Intel



**Advanced Mac Look and Feel**

**Yellow Box**  
**OPENSTEP based**

**Java**

**Core OS: Microkernel, I/O, File System, etc.**

**Intel Based PC Hardware**





# Rhapsody for Intel



Advanced Mac Look and Feel

Yellow Box

OPENSTEP based

Core OS, Mach kernel, I/O, File System, etc.

Intel Based PC Hardware



# Yellow Box for Windows



**Microsoft Windows™ Look and Feel**

**Microsoft  
Windows™  
95/NT**

**Yellow Box  
OPENSTEP based**

**Java**

**Intel Based PC Hardware**





# Yellow Box for Windows



Microsoft Windows™ Look and Feel

**FOR DEVELOPERS:**  
**NO FEE LICENSING**

Microsoft  
Windows™  
95/NT  
Java

Yellow Box  
OPEN STEP based

Intel Based PC Hardware



# Yellow Box for Mac OS



## Mac OS Look and Feel

Mac OS

Yellow Box  
OPENSTEP based

Java

Power Macintosh, PowerPC Platform Hardware

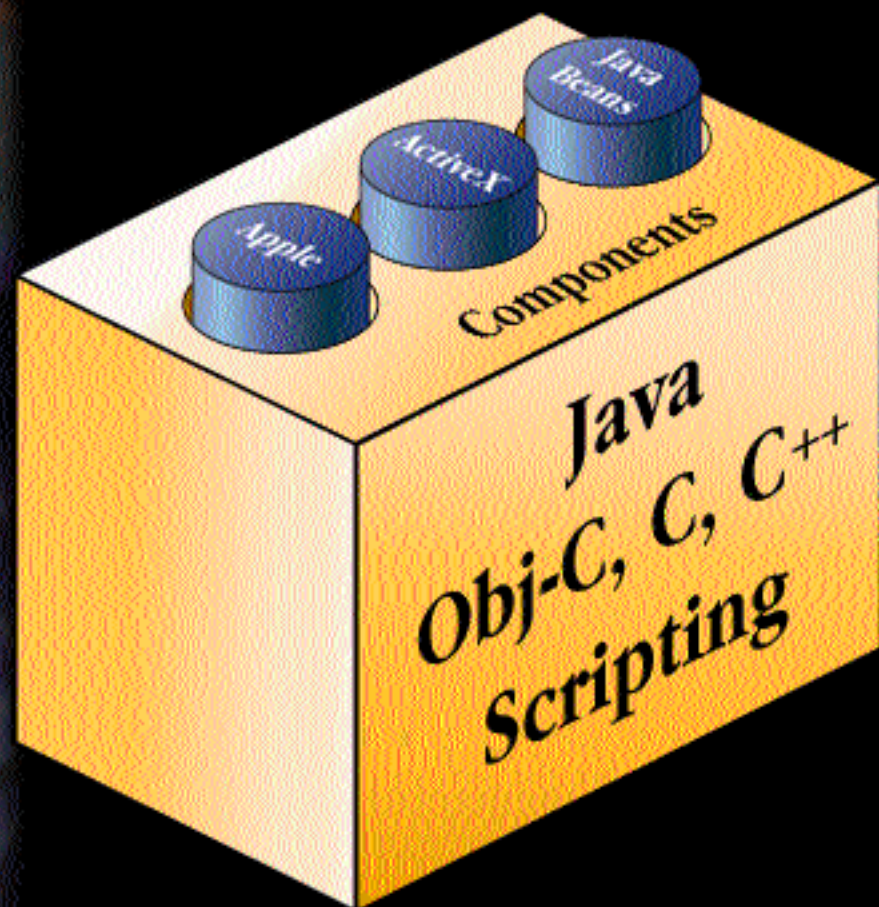




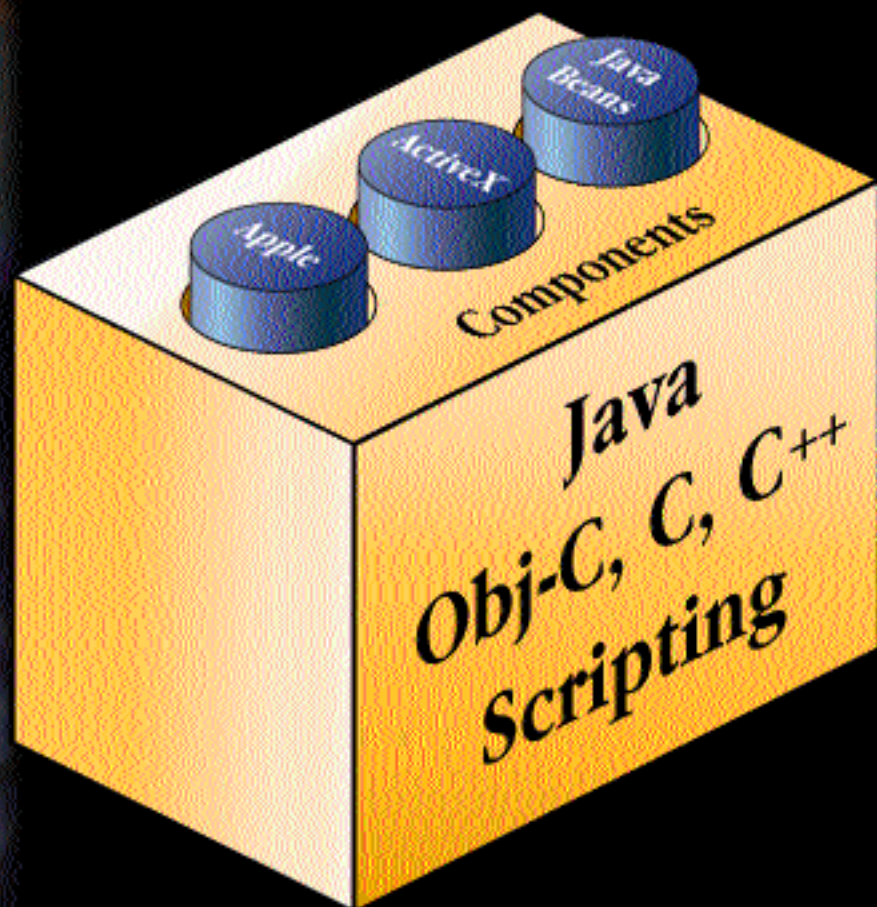


Rhapsody

Demo







**PowerPC**





The background of the slide is a collage of various images. At the top center is a large, dark, reflective sphere with a white Apple logo on its surface. To the right of the sphere is a green, mechanical-looking device with several vertical tubes. Below the sphere is a purple, glowing sphere with several bright, curved lines of light (yellow and blue) swirling around it. The overall color palette is dark, with shades of brown, blue, and purple.

# Worldwide Developers Conference

# Conference Overview

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- Mac OS
- Rhapsody
- Internet/Web technologies
- Interactive Media
- Hardware



# 120 Hours of Sessions

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- Technical Primaries and Breakouts
- Feedback forums
- Sponsored sessions





# Special Events

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- **H.I.D.E. Awards—Tuesday**
- **Rules for Revolutionaries—Thursday**
- **Fireside Chat with Steve Jobs—Friday**
- **Closing Keynote with  
Guerrino De Luca—Friday**



# Expo

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- **Wed-Fri**
- **Hall 2**
- **Over 80 Companies**
  - **WebObjects/OpenStep Solutions**
  - **Tools**



# Hands-On Labs

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The background of the slide is a collage of various images. At the top center is a large, dark, reflective sphere with a white Apple logo on its surface. To the right of the sphere is a green, mechanical-looking device with several vertical tubes. Below the sphere is a purple, glowing sphere with several bright, curved lines of light (yellow and blue) swirling around it. The overall color palette is dark, with shades of brown, blue, and purple.

# Worldwide Developers Conference