JavaOne℠

Sun's Worldwide Java Developer Conference

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Java™ Development Tools from Metrowerks

Greg Galanos
President & CEO

Keynote Roadmap

- Product Introductions
  - Marcus Jager / Dave Mark on CW9 and Discover Programming with Java™
- AWT and VM Specifics
  - PowerPlant Mappings
  - x-language Support
  - Greg Dow on Debugging
- Futures
  - Greg Dow on Nextgen Tools

Metrowerks Corporation

- Leading Tools Provider for Mac OS
  - 110 Employees
  - 56 in CodeWarrior Engineering
- Targets
  - Desktop Computing
    - Mac OS and Win95/NT
  - Mobile Computing, Digital Entertainment and Internet Development
- www.metrowerks.com

Awards

Java REPORT

1994 MacUser Editors' Choice Awards WINNER

SOFTWARE PRODUCT OF THE YEAR

MacLife Grand Prize

1994 BYTE AWARD OF EXCELLENCE

Macworld 1996 WORLD CLASS AWARD WINNER

MacUser RATED 5 5 5 5 1/2

SYMMac AOUT 1995

MacUser 総合評価 4 4 4 1/2

Technology Partners

sun microsystems

PowerTV™

Be™

SONY

Magic Cap™ DEVELOPMENT

U.S. Robotics®

Microsoft®

MOTOROLA®

CodeWarrior Lineup

CodeWarrior

Industrial Strength Solution – $399

- Unified IDE (multi-language/target)
  - C/C++, Java™, Object Pascal
  - 68K, PPC, x86, MIPS
- Integrated Browser
- Open Browser API for any Plug-in
  - Supports C++, Java, Object Pascal
- Multi-language/Target Debugger
  - Supports C, C++, Java Debugging
  - Supports 68K, PPC, x86, JavaVM Targets

Discover Programming with Java™

Incredible Value – $99

- Same IDE, Browser, Debugger as CW
- All the Java Tools
  - VM, Compiler, AppletViewer
- MS Internet Explorer
- Apple Guide Files
  - Learn Java Programming
  - Tons of Training Material

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DEMO

JavaSoft Licensee on Mac OS

- Original VM from Sun
- Original Compiler from Sun
- Debugger by Metrowerks

VM from Sun

- New Port Based on Solaris
- Uses PowerPlant for...
  - Threads, Networking
  - AWT
- New “Mac Friendly” GC
- CFM (PPC and 68K) for Native Libraries
- 68K VM and PowerPC Accelerator
  - Yields 40% VM speedup on PPC

Compiler from Sun

- CW IDE-hosted (68K and PPC)
  - Made to work with CW Plug-in API
- Removed File Name and Location Restrictions
- Generates Browser Information for IDE
- Inputs .java, .zip or .class Files
- Outputs .zip or .class Files

Debugger by Metrowerks

- Bytecode and Source Level
- Debugs .class or .zip files
- Cross-language Debugging
- Debugger Hooks use MetroNub

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DEMO

CodeWarrior Internet Story

- Support Apple's Internet Strategy
  - Support for OpenDoc, Cyberdog, Java-SOM
- Develop Tools
  - Aggressively implement Java Tools
- PowerPlant Database Classes
- PowerPlant Internet Classes

Cross-Platform Internet Microsoft – Metrowerks

Make Mac OS top net client

- Microsoft to:
  - Build Internet Explorer with PowerPlant and CodeWarrior Enhanced-VMs
  - Provide MS APIs on Mac OS in CW SDKs
- Metrowerks to:
  - Support ActiveX in PowerPlant
  - Bundle MSIE with CodeWarrior
  - Support COM/ActiveX in CW VMs

Native Java Compiler

- High Performance Java Front-end
- Back-end generates Java Bytes Codes
- Also generates IR for CW Back-ends
  - Go Native 68K, PPC, x86, MIPS
  - Provides for additional Native Optimizations
  - VM Services built as Shared Libs
- Portable Technology

Java ToolWerks

- Java Byte Codes to Native Codegen
- JITs
- License CW VMs
  - VM Embedding in PowerPlant Apps
  - 680x0 Accelerator for CW VM
- Visual Dynamic Development in Java with Constructor
  - Embedded Interpreter
  - Java “Catalogs”

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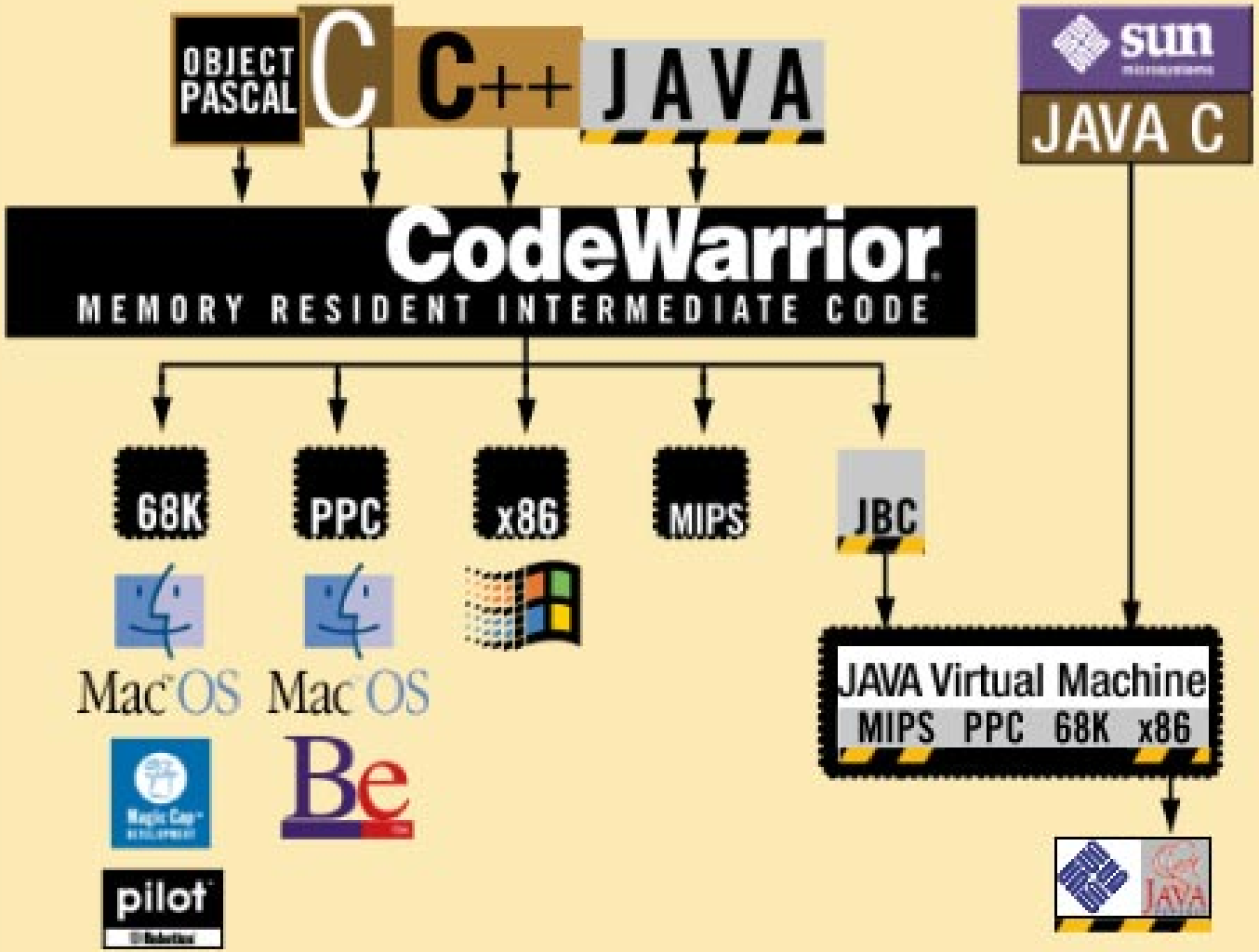
CodeWarrior for Windows95/NT

- Comdex Launch
- Support All Tools Cross-Platform
  - Java Tools (all VMs)
  - Mac OS from Win95/NT
  - Network/Set-top Box, PDAs, COs
  - Develop Native x86 or MIPS Embedded
  - PowerTV, Apple ITV, General Magic “MagicCap”, US Robotics “Pilot”
  - Java OS™ Network Devices

CodeWarrior Support for Java OS™ (“Kona”)

- CodeWarrior Embedded SDK
- Industrial Tools for the Embedded Java World
- Same Desktop, High-Volume, Cost Structure
- 1st Target – JavaOS/x86 Tools
- Working on JavaOS Reference Release with JavaSoft

Program the Future