



JavaOneSM

Sun's Worldwide Java Developer Conference



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Sun's Worldwide Java Developer Conference

Java™ Industry Outlook

Lew Tucker
Director, JavaSoft
Corporate and ISV
Relations



Objectives

- What is Java™ for?
- Where is it going?
- How it will become an industry



Java TimeLine

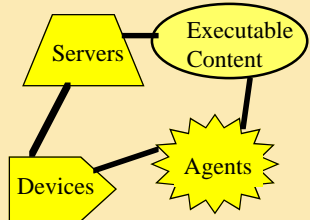
Year One	Year Two	Year Three +
Java as Language	Java as Platform	Java the Industry
Animated Web pages	Create/Deploy Apps on the Web	Embedded functions “under the hood” ubiquity

Hello World



Business
Applications

Internet
Services





Java Wakes up the Web

- The Java language released in Netscape 2.x
- Animation, stock tickers and steaming coffee cups bring new life to static web pages
- Software tool vendors launch first products
- Avalanche of interest - 40k downloads month
- EarthWeb's Gamelan directory lists 2258 entries
- 25 books in print, 70 more in the works
- Java Days events draw thousands nationwide



Why Did Java Become So Popular?

Year
One

- Java met the needs of developers, corporations and end-users
- Designed for the Web
- Platform independent
- Simple, compact and architecturally neutral
- Easy to program
- Buzz word compliant (Open, Object oriented, ...)



What Were the Issues?

- “Java is slow”
- “How will I be sure of Java capability existing in my platform of choice?”
- “Sounds great but how do I use it?”
- “Where are the application development tools?”
- “Where does Sun fit in this?”
- “And what about Microsoft?”



Rapid Response from the Industry

Year
One

- JavaSoft is founded by Sun Microsystems Inc.
- Java technology is licensed to major OS vendors (Microsoft, Apple, IBM, SunSoft, SCO,...)
- Netscape incorporates JDK 1.0
- Symantec, Borland, SunSoft,... announce tools for Java application development
- System Integrators and VARs setup Java engineering groups

Major Market Segments Move to Adopt Java

Year
One



Consumer Goods

- ◆ Pepsi
- ◆ Sears
- ◆ Walmart
- ◆ Gap
- ◆ Walgreens

Entertainment

- ◆ Disney
- ◆ SEGA
- ◆ Viacom
- ◆ NBC
- ◆ BlockBuster

Content Publishing

- ◆ R. R. Donnelley
- ◆ Time Warner Inc
- ◆ National Geographic
- ◆ Delphi
- ◆ Associated Press
- ◆ Wired Magazine
- ◆ Hearst New Media Group
- ◆ Pearson Financial Times
- ◆ CondeNast
- ◆ C|Net
- ◆ NandoTimes

HealthCare

- ◆ Kaiser
- ◆ Boston Children's Hospital
- ◆ UCLA Med Center
- ◆ Los Alomos Labs
- ◆ Columbia/HCA

Financial Services

- ◆ Reuters
- ◆ Dow Jones
- ◆ JP Morgan

Telecommunications

- ◆ Bell South
- ◆ Pacific Telysis
- ◆ PSI
- ◆ MicroMuse
- ◆ Belcore

Integrators & Consultants

- ◆ Anderson Consulting
- ◆ EDS
- ◆ Poppe Tyson

Online Service Providers

- ◆ Premenos (EDI)
- ◆ Kodak (Picture Exchange)
- ◆ FujiXerox (Document Services)
- ◆ @Home



Summary of Year One

- Presence is established on the WWW
- Key partnerships are in place (licensing, OS, browsers,..)
- JavaSoft is focused on making Java a successful platform
- Sun is taking a leadership position in making the Java language an industry-wide phenomena



Meanwhile.....

- Licensees push specifications to new levels
- Java extended API's broaden platform capabilities
- Drag-and-drop tools for web designers and non-programmers come to market
- Enterprise-level client-server applications are being developed
- Net Computers and Internet Terminals pick up the Java language for dynamic extensibility



Java Timeline

Year One

Java as **Language**

Animated
Web pages

Year Two

Java as **Platform**

Create/Deploy
Apps on the Web

Year Three +

Java the **Industry**

Embedded functions
“under the hood”
ubiquity

Hello World



Business
Applications

Internet
Services

Servers

Executable
Content

Devices

Agents



How is the Environment Changing?

Year
Two

- Web Computing is taking off
- Intranet computing is increasingly popular as an answer to client server computing costs
- Internet computing is moving towards realization of electronic commerce
- Brand name ISVs are targeting the Java platform
- New Internet services are coming online



Web-based Computing Takes Over

Year
Two

Internet

- **Get closer to the customer**
 - Corporate image and advertising
 - Customer services and support
 - New distribution channel
 - Customer does all data entry
 - Customer feedback and demographics

Intranet

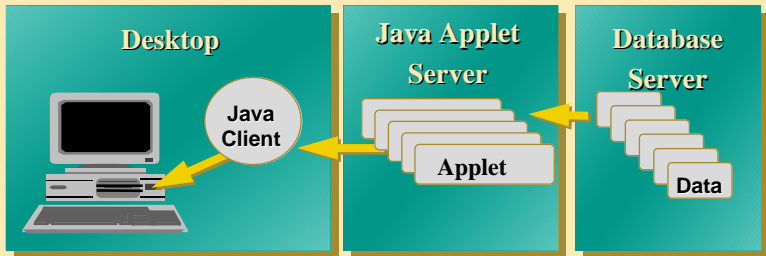
- **Get closer to one's business**
 - Internal communications
 - Client-server apps for heterogeneous environments
 - Server-based software model that reduces desktop administration costs
 - Direct vendor/supplier communication

Java Web-based Solutions Change Basic Economics

Year
Two



- ◆ Supports Multiple Platforms
- ◆ Versions and Configurations
- ◆ Low cost client admin
- ◆ Rapid deployment
- ◆ Scaleability
- ◆ Security...



Web-based application server solution



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Java Web-
based
Solutions
Change Basic
Economics

*Frank Galdes,
Product Manager*

Kinetix

*Subsidiary of
AutoDesk, Inc.*

Hyperwire



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based
Solutions
Change Basic
Economics

*Bob Schoettle,
VP of Marketing
Wayfarer
Communications,
Inc.
QuickServer*



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based
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Change Basic
Economics

*Steve Zocchi,
Director of
Marketing
Spider
Technologies
NetDynamics*



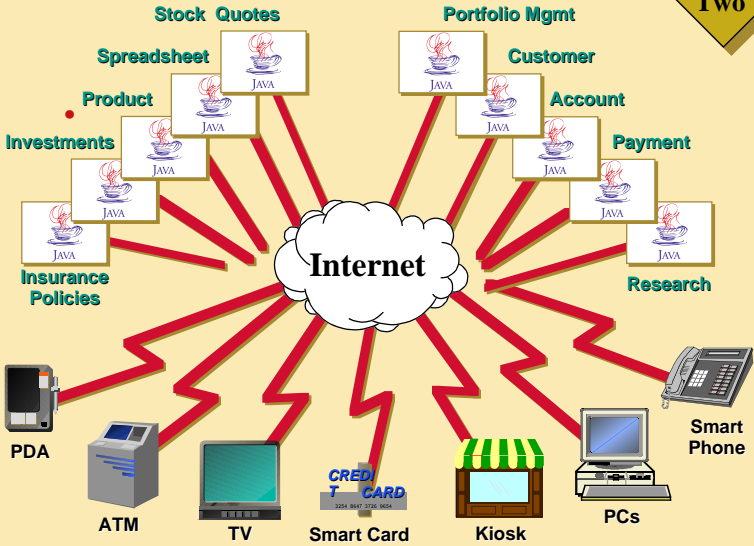
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Java Web-
based
Solutions
Change Basic
Economics
Jack Bowers,
Development Project
Manager
Dun & Bradstreet
Software
SMARTStream Web
Series-Requisitions

Internet Full Service Providers

Year Two





Summary Year Two

- Java Platform is established
 - JavaApplet APIs, JavaMedia APIs, JavaEnterprise APIs, JavaCommerce APIs, JavaSecurity APIs
- Enterprise Java applications are deployed
- Internet Java-based services proliferate
- Network Computers are launched



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Java: Year 3 and Beyond

What does it mean to become an industry?



Java Will Become an Industry Because:

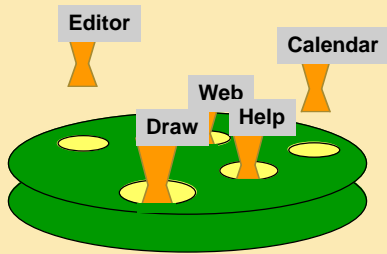
- Java technology addresses the needs of network computing
- It has wide-spread acceptance in the industry
- It allows for extensions to the core functionality
- Sun has been a leader in Open systems computing
- Java technology represents a paradigm shift creating new opportunities for hardware, software and service companies



Key Factor: Distribution Models are Changing

Year
3+

- Applications become frameworks
- Functionality is loaded on demand
- Software is user-customizable
- Purchasing and distribution models must adapt to new paradigm





Key Factor: Relationship with Customers Are Changing

Year
3+

- Direct “over-the-net” channel
- Online assistance and services
- Instant customer feedback
- Direct marketing opportunity based on real user data
- Installed base becomes annuity for add-on's and enhancements





Other Examples

- Information Services: Personalized delivery mechanisms
- Telco: Rapid deployment of short-lived services
- Manufacturing: Mass customization
- Entertainment: Interactive multimedia



In This New World Order....

- Line between applications and services is blurred
- Web extends outward to cell phones, pagers, instruments, and other handheld devices
- Java-based agents move freely throughout the web
- Executable content is king



JavaOne Pavilion Participants

- Adobe
- Aimtech
- Asymetric
- Bitstream
- Borland
- BulletProof
- CADIS
- CBT
- Cayenne
- Connect!
- Corel
- DEC
- DimensionX
- Dun & Bradstreet
- EarthWeb
- Electric Communities
- EveryWare
- FTP
- Finjan
- FutureTense
- Globetrotter
- HDS Network
- IBM
- Informix
- Intel
- Integrated Computer
- Intersolv
- Justsystem
- KL Group
- Kinetix
- MKS
- Macromedia
- Microsoft
- Metrowerks
- Mitsubishi
- Natural Intelligence
- Netscape
- NeXT
- Object Design
- OpenConnect
- OpenEnvironment
- Open Horizon
- Parc Place
- Penumbra
- Platinum
- Post Modern
- Rogue Wave
- Rationa
- Sun Microsystems
- Silicon Graphics
- Spider
- Starfish
- Sun River
- Symantec
- Tatung
- Thought
- Visigenic
- Visix
- Wayfarer
- WebFlow
- Web Techniques
- Worlds
- Ziff-Davis
- XDB