Topics

- Usage of Java technology today – You are using Java technology whether you know it or not
- Introduction to Java technology
- JavaFX: New RIA technology over Java platform
- Real-life Java Technologies
- Information technology: Next 10 years
  > How Java technology plays an important role
- Questions?
Usage of Java Technology Today
The Most Powerful Force in Software

- 6M Developers
- 5B Devices
- 2.5M GlassFish
- 800M Desktops
- 1.8B Phones
- 11M Televisions
- Participation
Java Technology in End-to-End Computing

Data Center

App Server Tier

Edge Tier

Client Desktop Tier

Devices & Appliances Tier
You are already using Java: Online
You are already using Java: Online
You are already using Java: Company

SunWeb: SMI Internal Portal - Mozilla Firefox

SunWeb

For Sang Shin

News Life Work My Workspace

Top Spot

Innovation Matters

Carolite on Our Minds

Transcript Available | Archive

The Insider

Redshift Customers Uncut

Archive

SMI Playbook

- FY08 SMI Playbook
- Group Playbooks
- The Sun Strategy

Press Releases

- Nov 28 Sun, SAS Launch New Initiative
- Nov 27 Afgh Healthcare Selects Sun
- Archives

Knowledge Center

Sun Learning Services and Corporate Marketing
Sharing Market Research Reports Outside

SunNews

Caps Creating Unexpected Problem for Datacenters

November 30, 2007 - Speaking at a U.N. conference on IT industry responsibility for the environment, Lorri Duvall, director of energy responsibility, noted that many companies, particularly in large urban areas, are prevented from implementing energy-saving initiatives because doing so may require short bursts of energy that exceed caps imposed by power companies.

More

FreshBrain Revisited

Sun’s Partnership with New Nonprofit Continues

November 29, 2007 - When we last spoke to Software VP Dale Ferrone, he was starting a new company—a nonprofit called FreshBrain—running on Sun technology. When we caught up with him again last week, Ferrone and his team of volunteers (mostly Sun employees) had reached a major milestone and were looking forward to another.

More

Stock Info

- JAVAD: 20.78 +0.13
- DOW JONES: 13,371.72 +50.99
- NASDAQ: 2,660.95 -7.17
- S&P 500: 1,481.14 +11.42

As of 4:14 PM ET on Nov 30

Employee Stock Trading Policy
Stock Trading Window Info

SunWeb Updates

- SunWeb Intranet Services
- Top SunWeb Searches (Monthly)
- SunWeb Collab Performance Updates
- SunWeb Portal Performance Updates

Sun IT Updates

- Critical IT Security Alert
  Mac OS X 10.4.11 and Security Update 2007-008 Released (15-Nov-07)
  Microsoft Updates for Multiple Vulnerabilities (14-Nov-07)
You are already using Java: Limewire
You are already using Java: Games
You are already using Java: Mobile Devices
You are already using Java: JavaCard

What we could do for travelers...

- Ticketless travel, air miles
- Telephony
- Car voucher with air miles
- Electronic cash
- Hotel coupons

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## Java Is Everywhere!

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Introduction to Java Technology
Java History

• The Java platform was created by James Gosling as a "side effect" in the "Green project" started at Sun in 1991

• Original idea was to be able to control a variety of devices with different hardware and software platforms
  – toaster

• The advent of the Web and the Netscape Browser gave Java a new purpose and market
The Java™ Platforms

Java Technology Enabled Devices
Java Technology Enabled Desktop
Workgroup Server
High-End Server
Why Java for Developers?

• Portability of the application
  > Write once, run on many different platforms (for example on Solaris, Linux, Windows, Mac OS...)

• Increased Productivity
  > Studies have shown 2x productivity compared to C++
  > Not only during coding phase, but also during testing and maintenance!

• Tool Support
  > The industry has spent most of the tools effort in the past several years on Java tools
  > NetBeans, Eclipse, JBuilder, ...
Why Java for End-Users?

• Portability
  > A Java application does not mandate a particular hardware / operating system platform

• Many Java-based free software
  > Virtually in every possible area you can think of

• Java programs are very secure
  > Have you heard of Java virus?
Why Java for Businesses?

• No vendor lock-in
• They can pick and choose the best of breed Java-based enterprise application platform
  > Vendors compete in the area of performance, scalability, tools, and support
• They can pick and choose the best of breed Java-based enterprise applications
  > A wide variety of choices based on price, vendor reputation, support, etc
• There are so many production quality Java-based open-source software
JavaFX:

New RIA (Rich Internet Application) Technology over Java Platform
JavaFX Vision

JavaFX is THE platform for creating and delivering Rich Internet Applications across all the screens of your life

JavaFX is Powered by Java
# Targeting Developer/Designer workflow

## Creative Community
- Karl May (Mashup author/builder)
- Sean Wani (Graphic Designer)
- Saloni Sarin (Creative Director)
- Wayne Stidolph (Programmer)
- Tom Hammer (Media Editor)
- Adam Nielson (Web Master)

## Consumers
- Livleen (Student)
- Amy Lewis (Suburban wife/mom)
- Samir Arora (Business Professional)

Rich Internet Apps + content across desktop, mobile, TV, car
Demo: JavaFX
Information Technology: Next 10 years
How Do You Predict the Future?

- Generally accepted “Laws of computing”
- Technology trends
- Adoption cycles of a technology
Computing "Laws"

• Moore's Law
  > Computing speed roughly doubles every 18-24 months

• Gilder's Law
  > Network bandwidth capacity doubles roughly every 12 months

• Metcalfe's Law
  > The value of a network grows exponentially as the number of nodes increases
  > Technology echo-system is being formed
Trends in Information Technology

- Proliferation of computing devices
- Mobile devices as major computing platform
- Networking everywhere by everything and everybody
- Participation (software users & developers)
- Social networking
- Web as a computing platform
- Software as a service
- Open source movement
Proliferation of Computing Devices
Proliferation of Computing Devices

Data Center  Application  Edge  Client
Relevance of Java Technology

• The portability of Java application (Write Once Run Everywhere) is becoming increasingly critical as the number of computing devices proliferate
  > A single Java application runs over thousands of devices
Mobile Devices as Major Computing Platform
Mobile Devices Are Becoming Major Computing Platform!
Relevance of Java Technology

• Before Java technology:
  > Software development and deployment was painful (Developers and Network operators)
  > New software installation was close to impossible (Users)

• With Java technology:
  > Most of the mobile devices already have Java platform pre-installed
  > Java is the most popular programming language for writing mobility applications
  > You can download many Java applications
Demo:

Building Mobility Application
Networking Everywhere by Everything & Everybody
Everything and Everybody Join the Network!
Relevance of Java Technology

• Java is built with networking in mind
  > Complete set of networking features
• Java code can be moved around among networked devices
  > Dynamic installation of application is possible
  > Dynamic networking among devices are possible
Era of Participation
Everybody Participates

The Age of Participation
Participation is Already Happening All Around Us

Enterprise
Collaboration among business organizations, employees
New Business Models

Consumers
Blogs
Instant Messaging
The New P2P
Social and Job Networking
Online Gaming

Developers
Java
cjava.net
Open Source communities
OpenSolaris

Public Sector
Inter-Agency Collaboration
Adoption of OpenOffice
Healthcare Networks
Political Campaigning
The Benefits of the Participation Age

Social and Cultural

- New forms of collaboration, entertainment
- Solving complex global problems through networking

Economic

- Bigger marketplaces
- Lowered barriers to entry
- New forms of wealth and value
Participation Age Business Models
Social Networking
facebook - it changes our life-style!
Demo: Building Facebook Application using “zemply”
Web As a “The” Computing Platform
Web-based Applications: Consumers

- Email
- Online shopping
- Travel reservation
- Instant messaging
- Social networking
- Internet phone
- Map search
- ...

Welcome to the “Webolution”

- Smart Mobs
- Co-Creation
- Wikis
- Blogosphere
- Tags
- Social Networks
- The Long Tail
Software as a Service (Cloud Computing)
The Shrink Wrap-to-Network Services Revolution

- **Software Idea**
- **Packaged Applications/Shrink Wrap**
- **Network Services**

### Target
- **Customer’s Computer**
- **Developer’s Data Center**

### Distribution
- **CD**
- **Internet**

### Customer Economics
- **High cost**
- **Low cost**
Open Sourcing
Sun’s History of Community

- Apache Software Foundation
- NFS
- BSD
- UNIX SVR4
- Sun 1 with TCP/IP
- SPARC
- Java
- Java Community Process
- Liberty Alliance
- Open Solaris
- OpenSPARC
- open source
- GNOME
- netBeans
- Project Looking Glass
- Jini
- mozilla
- JXTA
- XML
- OpenOffice.org

Timeline:
- 1980
- 1990
- 2000
- 2006
Open Source Momentum

• Some Facts
  > 800,000 the number of developers contributing to open source
  > 87% estimated number of US businesses using open source

• Increasingly a required in established markets, including government

• Critical in developing economies (Brazil, Russia, India, China)

“the most significant all-encompassing and long-term trend that the software industry has seen since the early 1980s.”
Why Should Developers Care

- Great learning tool
- Opens new Opportunities
- Build a reputation/visibility in the community
- Build on your core technologies
- Borrow your non-core technologies
- Potentially lower maintenance burden
- Contribute to and leverage a code commons
- Work in community with the best and brightest
Relevance of Java Technology

- Pretty much all Java based technologies and solutions are in open-source form
  - JDK
  - Tomcat
  - NetBeans, Eclipse
  - GlassFish app server
  - OpenESB
  - OpenSSO
  - OpenDS
  - OpenSolaris
  - Many more
Questions & Answers