



Keynote
Sun Labs Open House 2004

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2004
Sun Labs
Open House

Sun Microsystems Laboratories

- Mission Statement
 - Solve hard problems brought to us by our customers
 - Innovate, demonstrate, transfer
- Ask the “unthinkable questions”
 - What replaces SPARC?
 - What replaces Solaris?
 - What replaces Java?

World Class Staff

- Sun Fellows (5 of Sun's 11):
 - Whitfield Diffie, Jim Mitchell, Bob Sproull, Guy Steele, Ivan Sutherland
 - James Gosling “on-loan” to Business Unit
- Distinguished Engineers:
 - Greg Bollella, Sheueling Chang-Shantz, Jo Ebergen, Richard Gabriel, Craig Forrest, Robin Jeffries, Lev Markov, Erik Nordmark, Brian O’Krafka, Radia Perlman, Steven M. Rubin, Dave Ungar, Jim Waldo, Bill Woods

Metrics . . .

- People: 175 - 200
- Patents
 - Total CTO/Sun Labs Patents (as of 12/02/03): 625
 - Sun Labs Patents as % of Sun: 12%
- PhDs: 80%
- Interns
 - Average 50 per quarter
- Tech Reports Published
 - 126 since 1991; approx. 12/year (2 in process)
 - 5 titles in the “Perspectives” series
- Technology transferred revenue value >\$2B
- Funded by Corporate Treasury - no Business Unit funding

Center for Innovation

We're about surprises . . .

Engineering (Business Units)

- No surprises
- Execution on-budget, on-schedule is key
- Eliminate ambiguity
- Incremental product evolution
- Stability

Research (Labs)

- All about surprises
- Execution is important but innovation is key
- Ambiguity is your friend
- Two Innovation options:
 - *Substitute products*
 - *New Markets*
- Break Glass

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- **How**

Research (Labs)

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- **Why**

Sun Labs Project Taxonomy

- Consulting
 - Customers & Business Units on “our” nickel
- Advanced Development
 - Hardware, software or processes deliverables to BU
- Vision & Research
 - Self directed core industrial research
- Micro-business Unit
 - Product quality, revenue model = break even
- Community
 - Open Source, Conferences, Publishing and Patents

Technology Transfer Leadership

Technology:

Java™
SPARC V9 Architecture Specification
Sun Ray™ 1, Wide Area Sun Ray technology
Sun Cluster™ 3.0
Async technology in USIIIi
Concurrent GC to Java SW
Liberty architecture
Awarenex
Conceptual Indexing Search in SunONE products
FreeTTS to Solaris
JINI™
JXTA™

Tools:

CAP modeling and analysis
Electric CAE Design Tool
ACE/DASL
IC CAD tools

Code:

Java™ and Java™ KVM
Hot Spot
Jackpot
Java Speech API
Parallel Garbage Collection
Java make Utility to Netbeans
Secure KVM to Java SW
Jackpot JavaDoc extensions to JDK

Standards and Protocols:

Service Location Protocol
Java Real-time extensions, JSR1

Open Source:

Elliptic Curve Cryptography
Jackpot metrics to Netbeans
JFluid

Sun Labs Project Focus

Service Delivery
 Economic Risk Mgmt
 Modeling Comp Arch
 Complexity
 Interval Arithmetic
 Distributed Systems

Systems

Security
 Better Java
 Synch
 Next Gen Languages
 Search
 DBMS

Software

Comm/Msg Tools
 Desktop HW
 Consumer HW
 Sensors
 User Experience

Clients

Hardware

Async, HW, Prox I/O, Tools
 Next Gen Processors
 Next Gen Systems (Blades)
 Switch Fabric

Content

Storage
 DRM CA/CP
 Digital Head End
 Streaming Media

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