

Leveraging Open Source Innovations in the Enterprise

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Topics

- Open Source innovations
 - What are they; whose using them; why
- Role of SourceForge.net
- Open Source development model
- Enterprise development challenges
- Enterprise opportunity areas
- SourceForge Enterprise Edition
- Case study/benefits
- Q & A

Open Source Innovations

- Tools & Technologies
 - GNU Compiler, GNU/Linux, Apache, PHP, Tomcat, JBoss, MySQL, etc.
 - Open Source quickly moving up the software value stack
- Techniques
 - Collaborative software development
- Openness encourages trust, collaboration, continual improvement

Adoption of, and confidence in, Open Source technologies gaining momentum in the Enterprise

**Linux for
Infrastructure** ¹
>50%

**Apache
Web Server** ²
69%

**JBoss
App Server** ³
25%

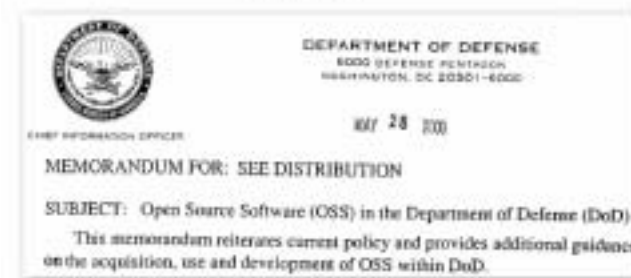
Open Source: Who's Involved and Why?

- Volunteer community
- Vendor community
- Corporate community
- Academia / Government



Sabre

"Sabre, the \$2-billion-a-year travel-reservations system, uses Linux and open-source database software in its Dallas data center, one of the largest on earth."



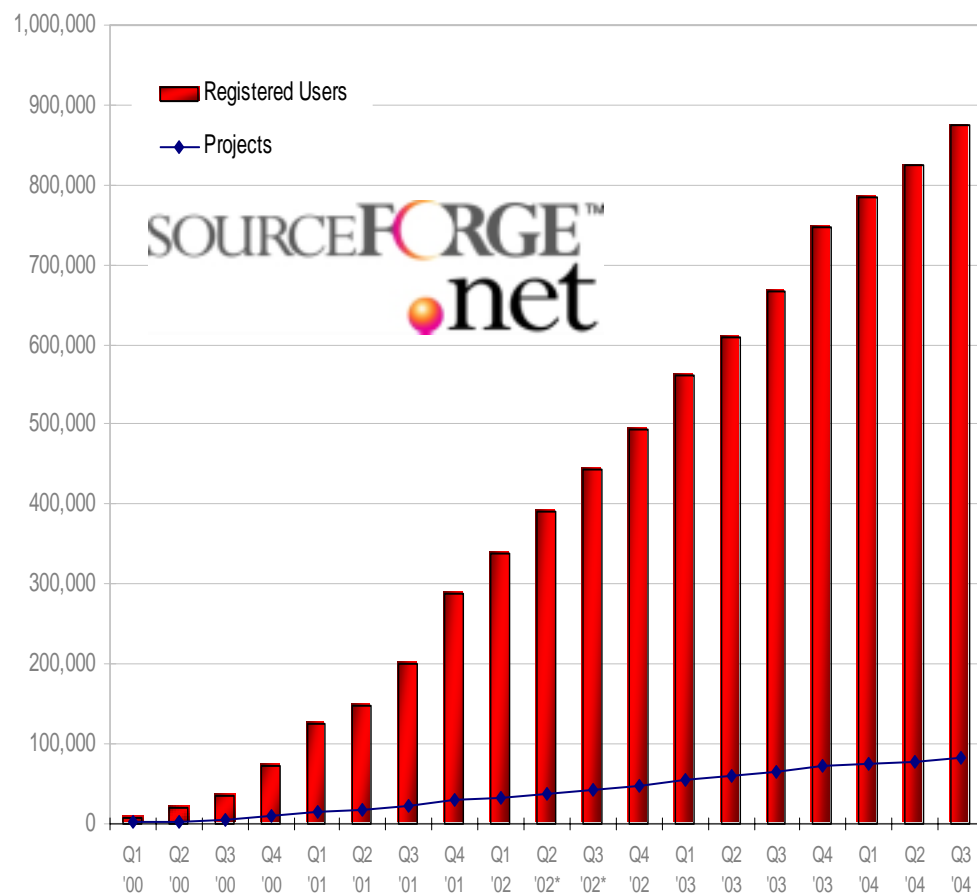
*InformationWeek Survey:
70% of business-technology
Professionals using Linux*⁴

What's Their Motivation?

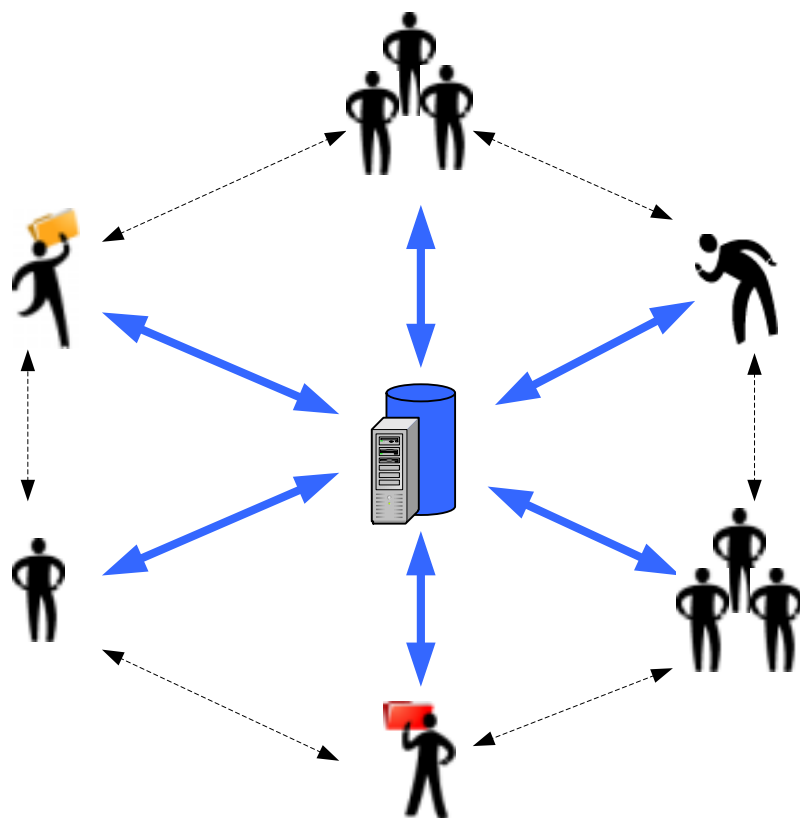
- Lower cost
- Performance & reliability
- Increase quality & value
- Flexibility, freedom, recognition

SourceForge.net is at the Center of Open Source Development⁵

- *First* site for broad Open Source project development
- 900,000+ reg. users
- 87,000+ projects
- 2.5+ million site views per day
- 1.4+ million downloads per day
- Dominant position in market: largest user base & code repository, unrivaled tools



Open Source Development Model⁶



- Virtual team online relationships
- Geographically-distributed contributors
- Leverage web-accessible information and resources
- Requirements developed quickly and collaboratively
- Collaborative development and QA
 - Peer-review
- Fast, iterative development cycles
 - Frequent builds, hierarchy of releases
- Work on multiple projects simultaneously
- Asynchronous communication
 - Email, forums, etc.

Enterprise Software Development Has Changed

Traditional Development

- Fewer participants
- Fewer locations
- Project/team stability
- Fewer & larger projects
- Slower technology shifts
- Limited toolset
- In-house development
- Fewer partners

New Requirements

- Larger # of stakeholders
- Wide geographic distribution
- Project/team agility
- Specialization, shorter cycles
- Rapid technology churn
- Wide range of tools used
- Use of contractors/outsourcing
- Partners needing access

Open Source and Enterprise Similarities: Developer View

- Need to communicate, collaborate and coordinate work across virtual teams
 - Work best if they use a common development platform
- Need to be flexible and responsive to changing requirements
- Like to avoid “re-inventing the wheel” if its already been invented
- Like to work with familiar tools

Challenges: Management View

Rapidly changing business goals

- Flexibility without compromising *quality* and *delivery*

Efficient use of resources

- Improve development efficiency
- Control IT or R&D costs
- Overcome knowledge silos
- Stem intellectual property loss
- Reduce rework, duplicated efforts
- Minimize administrative overhead
- Integrate disparate tools – don't start over

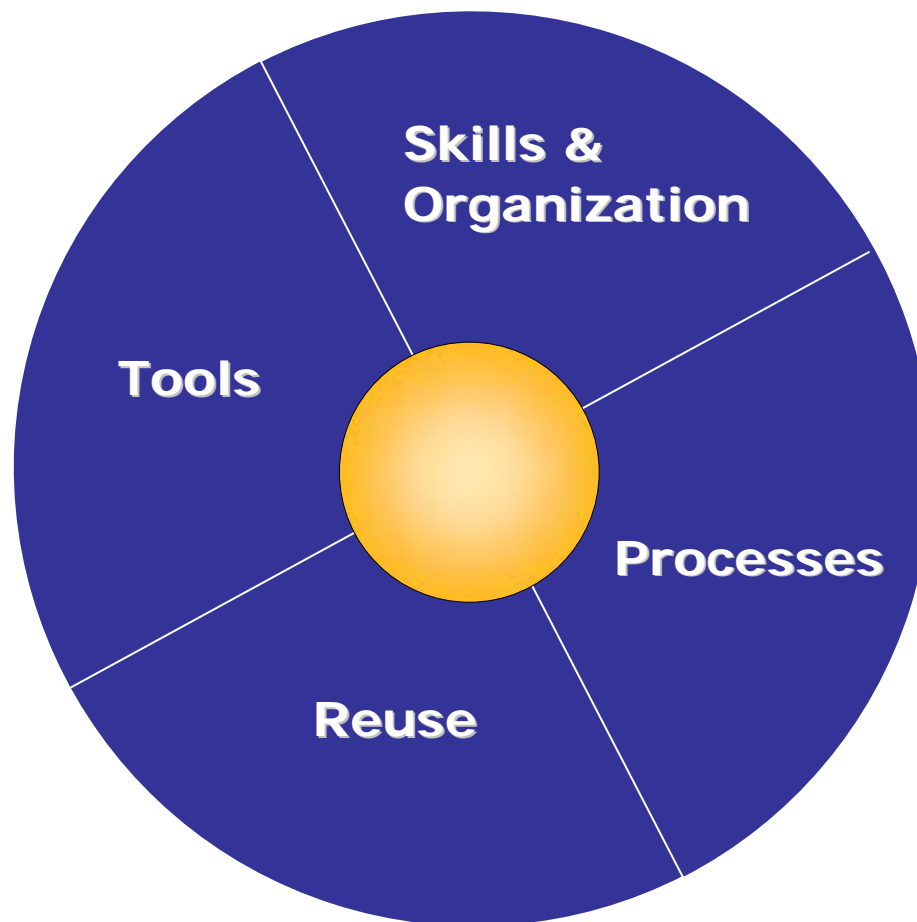
Management oversight & prioritization

Gaining visibility and control:

- Across projects
- Across company locations
- With outsourcing (on or offshore)



Four Opportunity Areas to Leverage Open Source Methods



Leverage Point #1:

Skills & Organization

- Work visible and shared with others
 - Exposure encourages quality, collaboration, trust, pride
- Greater resource/project flexibility
 - Better flow of expertise, skills and interests to specific problems as needed
 - Geographic or organizational location has little bearing on the best resource for a specific task
- Contributions based on merit rather than title
 - Ideas evaluated and debated regardless of source
 - Vigorous debate is good – everyone understands the issues
 - Encourages participation, collaboration, fresh viewpoints, innovation

Visibility & openness improves the entire organization

Leverage Point #2:

Process

- User / Developer collaboration
 - Speeds development of more accurate, clear requirements
 - More equal involvement of both producers *and* consumers
 - Mutual ownership and interest in outcomes
- Short, iterative, evolutionary cycles
 - Continuous, automated build, integration, test
 - Agility accommodates changes throughout development cycle
 - Reduces longer, more costly efforts that miss the mark
 - Always “ready to ship” based on need
- Focus on “need to have”
 - Speeds on-going trade-off decisions based on “need to have” vs. “nice to have”

***Focus on collaboration, short cycles
and “essential” features***

Leverage Point #3:

Reuse

- Leverage existing assets
 - Reuse existing development assets including documents, designs, models, code, processes, etc.
- Search, consume, comment
 - Centralized, searchable repository for asset discovery
 - Trust and consumption aided by visibility of asset source (creators), development context, and popularity based on reuse statistics as well as qualitative feedback
- Evolutionary improvements
 - Each reuse (or rejection) can improve assets
 - Growing asset base becomes competitive advantage

*Use more of what already exists,
improve over time*

Leverage Point #4:

Tools

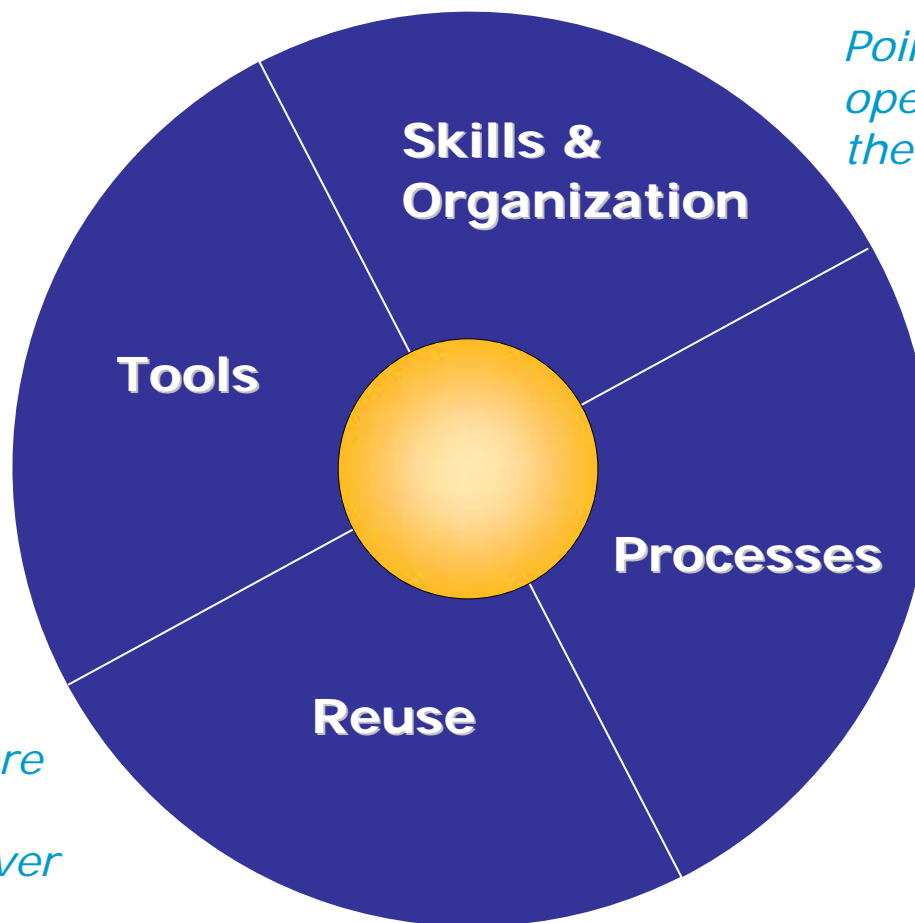
- Centralized repository and visibility
 - Centralized, highly-accessible location for managing project information, tasks, issues and IP assets
 - Connect teams, tools and technologies
 - Visibility into and across projects – regardless of location
- Network-enabled communication
 - Leverage Internet for communication methods that boost communication and collaboration on a global scale
- Flexible development environment
 - Support developers by allowing for disparate tools (even on a single project)
 - Leverage centralized system to fill gaps between heterogeneous tools and processes

Focus on accessibility, flexibility and adoption

Four Opportunity Areas to Leverage Open Source

Point #4: Focus on accessibility, flexibility and adoption

Point #1: Visibility & openness improves the entire organization



Point #2: Focus on collaboration, short cycles and "essential" features

Point #3: Use more of what already exists, improve over time

Benefits of the Open Source Model

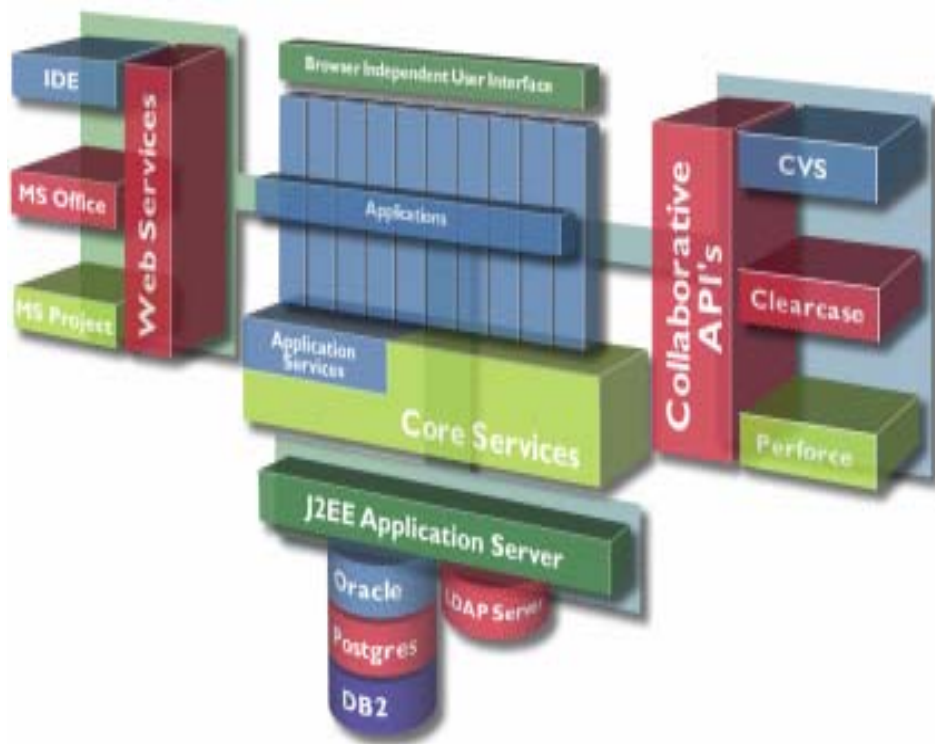
- Increased development efficiency
- Better software quality
- Improved responsiveness and agility
- More efficient use of resources
 - teams, tools, technologies
- Greater operational transparency

Key Enabling Technology: SourceForge® Enterprise Edition

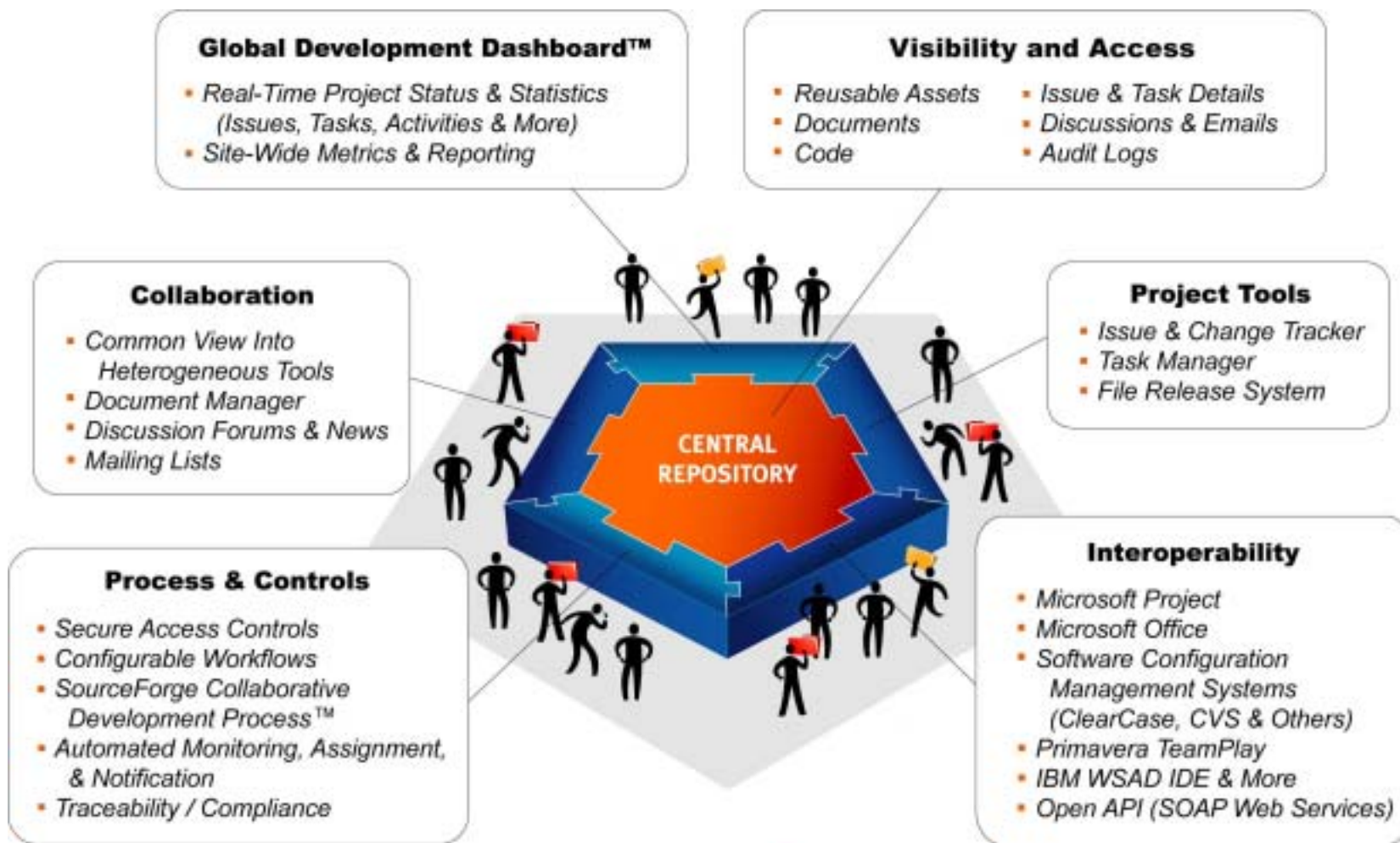
- Centralized, highly accessible system to connect teams, tools and processes
- Connects disparate tools and processes together with an integrated toolset
- Expands visibility and control
- Facilitates collaboration and innovation
- Reduces development costs, rework and risk

***Leverage Open Source development benefits
inside your enterprise***

Flexibility, Easy Integration and Rapid Adoption



- Enterprise-class architecture
- Three-tiered web services oriented (SOA) architecture
- J2EE-based
- SOAP XML web services API
- Complementary SDK
- Ready for integration and deployment across heterogeneous environments



SOURCEFORGE®

Optimizing Distributed Development™



Customers (partial list)

Acxiom
 Bluetooth SIG
 Bristol-Myers Squibb
 Cadence Design Systems
 CNA Trust Corporation
 Creative Advanced Technology Center
 (a Division of Creative Technologies)
 Dataline
 Detroit Edison Energy
 Diversa Corp.
 Emic Networks
 Enbridge Pipelines
 ETAS, GmbH
 Fujitsu
 FNMOC (U.S. Navy)
 General Atomics
 Global Grid Forum
 IBM
 Lockheed Martin
 Los Alamos National Laboratory
 Matsushita Avionics Systems
 MIT Lincoln Laboratory

Myrio
 Nortel Networks
 Northrup Grumman
 NTT Communications Corp.
 Open SystemC
 Osaka Gas Information System Research
 Institute Co., Ltd (OGIS-RI)
 Pfizer
 Pitney Bowes
 Sandia National Laboratories
 Sony Computer Entertainment America
 Sony Computer Entertainment Europe
 Sony Pictures Imageworks
 Space and Naval Warfare Systems Control
 (SPAWAR, Department of the Navy)
 Spirent Communications
 Sun Microsystems
 3Soft GmbH
 TNO Physics & Electronics Laboratory
 TranSwitch
 US Air Force
 US Army Research Laboratory
 USDA Forest Service
 VeriSign

Questions?

For more information:

- Download the White Paper on “Leveraging Open Source in the Enterprise” available at www.vasoftware.com (pending availability October 11, 2004).
- For copies of this presentation go to www.vasoftware.com and visit our Events archive

Thank You!