Open Source Middleware
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Moderator:
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Enterprise Data Solutions Practice Lead, Amentra, Inc.

Panelists:
Paul Loeffler
Director Business Development, Jaspersoft, Inc.

Richard Im
Channels Solutions Engineer, Alfresco

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Director of Open Systems Architecture, QinetiQ North America

Raja Gudepu
SOA Practice Lead, Amentra, Inc.
Dan Henley
Enterprise Data Solutions Practice Lead
Amentra, Inc.
Paul Loeffler

Director Business Development
Jaspersoft, Inc.
The Most Widely Used BI Software in the World

Paul Loeffler, Director Business Development
ploeffler@jaspersoft.com
Company Overview

- Creates the most widely used BI software in the world

- Headquartered in San Francisco, CA; approx. 85 employees worldwide

- Funded by leading venture capital / private equity firms and strategic partners: Morgenthaler Ventures, DCM, Partech International, Scale Venture Partners, SAP Ventures, Adams Street Partners & Red Hat

- Founding member of the Open Solutions Alliance and the Open Source Channel Alliance. Also belong to Open Source for America and Open Source Solutions Institute (OSSI)

- 11,000+ commercial customers in 96 countries

- More than 40 global partners including:
The Market: Size & Growth

- **8.1% CAGR**
  - 6.5% Stand-Alone Growth
  - 13.2% Embedded Growth
- **20.4% BI Platform Growth (2008)**
- **Key Trends:**
  - Vendor consolidation
  - Continued “CIO must have”
  - Departmental needs better served by “independent” BI vendors


- **22.4% Market CAGR**
- Growth accelerates over forecast period
- Increased customer interest
  - Greater choice
  - New innovation
  - Comfort with subscription model
  - Larger enterprise adoption

Open Source Software Market

- 2006: $1.8B
- 2013: $8.1B

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## Priority of Business Intelligence

### 2009 CIO Technology Priorities

To what extent will each of the following technologies be a top five priority for you in 2009?

<table>
<thead>
<tr>
<th>Technology</th>
<th>Rank 2009</th>
<th>Rank 2008</th>
<th>Rank 2007</th>
</tr>
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<tbody>
<tr>
<td>BI</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Enterprise Applications (ERP, SCM and CRM)</td>
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<td>2</td>
<td>2</td>
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<tr>
<td>Server and Storage Technologies (Virtualization)</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Legacy Application Modernization</td>
<td>4</td>
<td>4</td>
<td>3</td>
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<tr>
<td>Collaboration Technologies</td>
<td>5</td>
<td>8</td>
<td>10</td>
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<tr>
<td>Networking, Voice and Data Communications (VoIP)</td>
<td>6</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Technical Infrastructure</td>
<td>7</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Security Technologies</td>
<td>8</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Service-Oriented Applications and Architecture</td>
<td>9</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Document Management</td>
<td>10</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Note: Number of respondents = 1,500.
Source: 2008 Gartner Executive Programs’ CIO Survey, January 2009

Top-searched terms on gartner.com in 1Q09:
1. "Magic Quadrant"
2. "Cloud Computing"
3. "Business Intelligence"
Community Leadership

- The most vibrant ecosystem in Business Intelligence
- JasperForge.org - Winner of the InfoWorld 100
  - >10M total product downloads
    - Average 200,000 – 250,000 per month
  - More than 100,000 Registered Developers
    - 190,000 total registrations, 64,000+ Forum posts
  - ~350 active projects
  - ~160,000 Sessions (monthly) on average
  - ~800,000 Page Views (monthly) on average
Product Leadership
Simple, Powerful BI

Sophisticated charts
Integration with R for data mining

Drag & Drop Dashboards & Reports
Mash-Ups For Real-Time Updates
How we work with the JDSP

Information Consumers

MetaMatrix Server

Integrated Security
- LDAP/Auth Integration
- Roles
- Data and Metadata Entitlement

Access Modes
- Views
- XML Docs
- Services

Logical Data Model
- VDB

Query Engine
- Optimizer
- Processor

Connector Framework

Packaged Connectors
- SAP
- SFDC
- LDAP

Web Svc

XML

RDBMS
• DST Health Solutions – Business Process Outsourcing
  – DST Health Solutions process health care claims for about 324 health plans
  – If you break your leg it is likely that they process the claim
  – Many platforms built with many technologies

• DST’s use of JDSP
  – Great business decisions are made at the intersection of data from their various systems.

• DST’s use of Jaspersoft
  – Jaspersoft’s ad hoc query allows users to drag and drop data elements to build custom reports. Without knowing that those elements and the data are from completely different systems.

• DoD SAS 70 (Sarbox) compliance audit – needs reporting
  – Service providers are required to disclose their control activities and processes to their customers and their customers' auditors in a uniform reporting format.

• Bottomline: DST with JDSP and Jaspersoft meet all the Federal CIOs goals: Agile, Open, Transparent, Effective and Secure
Handysoft and Jaspersoft Power the NRC

• Handysoft – Dynamic Business Process Management
  – Manages, monitors and protects US Nuclear facilities
  – Heightened need for BPM post 9/11
  – Initiatives were managed by 35 independent systems
  – Handysoft delivers Electronic Document and Action Tracking System (EDATS) solution

• Gartner awards NRC and Handysoft EDATS Inaugural BPM Excellence Award
  – Created dynamic reporting environment enabling management to quickly identify areas for optimization
  – Empower 4000 knowledge workers with self serve access to create reports on real-time data
  – Improved staff productivity by saving the NRC an average of 75 people hours per day or the equivalent of $1.5M per year ROI of less than 1-year.

• Bottomline: Handysoft and Jaspersoft deliver the NRC all the Federal CIOs requirements: Innovative, Open, Transparent, Cost Effective and Secure platform for success.
Selected Federal, State and Local Customers
Thank you
Richard Im
Channels Solutions Engineer
Alfresco
Open Source Alternative for Enterprise Content Management

Richard Im
Channels Solutions Engineer
Alfresco Products

Document Management
Capture, Share and Retain Content

Web Content Management
Engage Through Content

Collaboration
SharePoint® Alternative

Alfresco Content Platform
Content-as-a-Service
Clustered, Federated and Replicated
Introducing Alfresco

Open
100% Open source; 100% open standards

Source
Superior ease of use, 5-10x performance at 1/10th the cost

Enterprise
Funded by Accel, Mayfield, SAP

Content
Documents, records, XML, web pages, images, rich media, code …

Management
World’s most experienced team in content management
1.5m Downloads
- 90,000 Community Members
- 50,000+ Live Sites
- 150 Forge Applications

Enterprise Edition: 750+
- Major Banks, Governments
- Media, Publishing, Education
- Professional Services

Rev Growth
- Year on Year 103%
- Qtr on Qtr 92%

Market Buzz
- Greater Web Activity than EMC Documentum, Interwoven and OpenText
Industry Leaders Choose Alfresco

Government:
- U.S. Small Business Administration (SBA)
- NASA
- U.S. Army
- Armée de l’Air
- Generalitat de Catalunya
- www.gencat.cat
- Canton de Vaud
- Swansea Housing Association
- Cymdeithas Tai Abertawe
- Lausanne

Financial:
- e-Trade Financial
- NYSE
- ING Direct
- JPMorgan Chase
- ABN AMRO
- Punto inmobiliario
- KNEIP
- American Farmers & Ranchers
- Daiwa Securities America Inc.
Industry Leaders Choose Alfresco

**Entertainment**


**Education**

MIT, Amnesty International, Massachusetts Institute of Technology, WGBH, CCSSO, Universiteit Gent, Université catholique de Louvain, Harvard, Kaplan, Michigan State University, Universitat de les Illes Balears

**Services**

IREM, Institute of Real Estate Management, Reed, H&R Block, UTA, Previsr, Davis Polk & Wardwell

**Other**

Raley's, FedEx, NISSAN, Pepboys Auto, Hitachi Data Systems, KLM, Royal Dutch Airlines, Samsung, Shimano, Enexta, TUI, Davis Polk & Wardwell
Our Business is about

- Certified software you can trust
- Rapid deployment
- Global Support when you need it
  - 24*7*365 Experts
- Value
  - Low Cost, subscription model
  - Minimal upfront investment
  - Op ex vs. Cap ex
- Try before you buy
Our Architecture

New, Standards-based Architecture

- The Repository: Developed using Open Standards.
- Spring Based Application
  - Inversion of Control – Application Code 'Injected', not hard coded
  - AOP – Create policies, enforced security.
- Database Choices
  - Hibernate for ORM: If there's support from Hibernate, we can deploy using it!
- Lucene
  - Java Search and Indexing: Store index locally on disk for fast read/write.
- Embedded Workflow
  - jBPM: Deploy your own workflow process definitions
- Hard Disk File Storage: Fastest performance

App Servers and Portals

AOP Framework

- CIFS, FTP WebDAV
- JSR-170 & Web Svs
- JSR-168 Portlets

Content Mgmt Repository

- Object Persistence
- BPM Control
- Distributed Store

Aspect (Module) Interface

- Database
- Storage
- Templating
- Indexing
- Workflow
- Security DRM
- Admin

- MySQL
- Oracle
- PHP Free-Marker
- Lucene
- jBPM
- Open DRM
- JMX
Alfresco Architecture

Applications

- WCM
- DM & RM
- Share
- Custom
- 3rd Party
- OEM

API

- Native Java
- Native REST
- Native SOAP
- JCR / JSR 170
- CMIS
  - REST
  - SOAP

Repository

- Version Control
- BPM-based Workflow
- Security & Auditing
- Policies and Aspects
- Content Modeling
- Forms
- Indexing, Search & Query Handler
- Tagging, Forums, Wiki, Blogs
- Templates & Transformations
- JMX Monitoring
- Clustering & High Availability
- Web Content Deployment

Database

File System

LDAP
Leading Alfresco Partner
Maintaining Home Grown System
Existing technologies in the application
Maintaining, scalability, availability issues
Lots of Glue code

Client: Intelligence Community
What does it do?

Supports ground forces in Iraq and Afghanistan – Mission Critical
Deployed on a classified network
70 Analysts producing XML content – 500-1000 Active forces using the content
Alfresco's Role

- Features such as: content modelling, search, workflow, and access controls

- What is this cryptic XML data?
  - Can't say BUT
  - Created by users using Microsoft Word

- Alfresco
  - Gets the XML
  - Using custom template engines output: PDF, HTML for field
  - Integrate with Drools

- Customized Search
  - Added soundex capabilities: How? Open Architecture, Open Source product and components (Lucene)
Questions ?
Michael Howard

Director of Open Systems Architecture
QinetiQ North America
Leveraging Open Source and SOA

GOSCON
November 2009

Michael Howard, Director of Open Systems Architecture
Current Enterprise Environment

Enterprise Interoperability

Family of Systems (FoS)

System of Systems (SoS)

Systems

Domain A

Domain B

Domain C
Service Enabled Enterprise Environment

Enterprise Integration

Lessons Learned

- Open Community Development
- Strategic Governance
- Implementation
- Portfolio Management
- Capability Module Approach

Standards-based Design & Development in Open Collaborative Environment

Domain A  Domain B  Domain C
Methodologies

- Apply Governance as a Standard Engineering approach across design and development in a System, Systems of Systems (SoS), or Enterprise Environment

- Application of a *Standards, Specifications, Patterns and Practices* approach.

- Capability Engineering Approach

- Coordinated informal testing across SOA programs

- Driving development with open standards regardless of sponsor

- Manage the development and implementation process to remain open and flexible and prevent single vendor or proprietary solutions
Governance

Programmatic

Operations

Technical Authority

Strategic Governance

Scales from Enterprise to Project

Approach to SOA Governance enables us to look beyond a single program

Understanding of the intersection between key elements of critical Joint and Service specific efforts
Delivering Capability

- Collaborative development across DoD programs is leading to a standard approach to deploying capability through a Capability Module approach.
  - Close collaboration during design process is imperative to assure interoperability.
  - Collaboration as each program leverages lessons learned from other programs during the development process is essential.

*Delivery*

**Capability Module** is a basic unit of functionality that implements a certain set of requirements grouped around a specific and focused operational activity.
Programs of Interest
Systems Integration and Training: Combat Operations Center (COC)

- **Customer:** General Dynamics (6+ years)

- **Mission:** COC is the Marine Corps’ largest command post system program that provides the network, communication, tactical data systems, and operational facilities for mobile command and control operations across all echelons and functional areas of the Corps.

- **Requirement:** Provide software integration and testing, network engineering, training, and fielding support for the COC Program

- **Accomplishments:**
  - Maintain the COC Software Integration Lab (SIL) and conduct software integration and testing into COC for 5 increments
  - Conduct over 200 one-week stand-up evolutions for COC New Equipment Training (NET) training world-wide
  - Provide DT / OT training and support
  - Developed and delivered all of the COC Training Curriculum for CapSets III and IV consisting of tents, generators, computer workstations, visual displays, and communications equipment
  - Conduct Command Post of the Future (CPOF) Training
  - Products: CBTs/ICWs, Lesson Plans, Training Aids, and Student Handouts
  - Fielded systems across CONUS, OCONUS, and Hazard Zone Locations

- **Acknowledgements**:

  Per Major Hamilton, MARCORSYSCOM COC Project Officer…

  “The actions of [this] team have greatly enhanced the fielding of the COC, and have been instrumental in the shaping of the Marine Corps’ MAGTF-C2 vision as a whole.”

Systems Engineering and Integration: Distributed Common Ground System (DCGS) Test Technology Team

**Customer:** U.S. Army Communications-Electronics Command (CECOM), PM DCGS-A (6 years)

**Mission:** Provide acquisition support, specification development, and COTS evaluation reports for DCGS-A software services

**Requirement:** Assess capabilities and limitations of commercial SOA product offerings to C4ISR domain application

**Accomplishments:**
- Define and implement Level 3 data fusion capabilities and services
- Port DIB to Linux and Windows
- Creation, Export and Display of Area of Interest
- Provide MTI data processed by CGS from JSTARS, ARL, U2, Apache
- Integrate UAV Video – Predator / Tactical UAV, Hunter
- Implement converters for real-time XML
- Develop CI HUMINT Workstation application

**Skills:** US Army, Joint and National C4ISR subject matter expertise, Service Oriented Architectures, Software development and integration (J2EE, Java, .net), data fusion, multi-level security, metadata definition, national exercise planning.
Prime contractor for three phased study
- Objective- Identify alternatives to provide logistics communications through the objective force years (2010)
- Approach
  - Model US Army logistics communications topologies and performance against Desert Shield/Storm communications requirements
  - Identify current capabilities and limitations
  - Identify problem areas and bottlenecks
  - Define Current/Interim and Objective capability requirements
  - Define and assess alternatives
  - Explore variations
  - Assess ROI for alternatives

Prime contractor for prototype effort
- Objective- Focus on 3rd Generation RFID device to provide global, near real-time In-Transit Visibility (ITV)
- Approach
  - Define requirements
  - Develop prototype including:
    - RFID TAG
    - Iridium Satellite Modem
    - Micro controller
    - Battery power source
Questions?
Raja Gudepu
SOA Practice Lead
Amentra, Inc.
Open Source Middleware

Raja Gudepu
SOA Practice Lead
Amentra Inc, A Red Hat Company
SOA Ecosystem

Open Source Benefits

» Lower Total of Cost of Ownership

» Lesser Barriers to Entry

» Architectural Validation

» Customization

» Flexible Licensing Model for Distribution

» Huge Community Support apart from Commercially Available Support
SOA Adoption Approach and Lifecycle

**Approach Benefits**

- Focus on People, Process and Technology
- Incremental approach to deploy standards-based, interoperable services.
- Mentoring based methodology to train and mentor client staff.
- Center of Excellence to define best practices, implement proof of concepts, provide SOA support and mentor staff.
SOA Case Studies

Civilian Agency Modernization / Enterprise SOA

» Hybrid model consisting of a mix of Open Source and Proprietary technologies.

» Standardized on JBoss SOA-P as their SOA Platform, JBoss BRMS for Business Rules Management, RHEL for Operating System and JBoss EAP for Application Server..

» Proprietary Registry, Repository and BPMS.

Department of Defense

» Tactical SOA

» Faster Service Discovery, Reuse, and Development

» Service Governance

» Data as a service - Data abstraction and integration.
Panel Discussion
Questions?

Tell us what you think:
Complete the survey