Enhancing Application User’s Experience with Web 2.0 Capabilities

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ORACLE FUSION MIDDLEWARE

User Interaction
- Web 2.0 Portal, Rich Internet Apps, Mobile, Search, Desktop, Presence, VoIP

Enterprise Performance Management
- Planning, Budgeting, Financial Management & Reporting, Scorecards

Business Intelligence
- Data Integration, Query & Analysis, OLAP, Dashboards, Reports, Alerts, Real-Time

Content Management
- Web Content, Documents, Digital Assets, Imaging, Records, Information Rights

SOA & Process Management
- ESB, BPEL PM, Workflow, BAM, Rules, B2B, MDM, Registry, SOA Governance

Application Server
- Java EE, Web Services, Complex Event Processing, XTP, RFID & Sensors, SIP

Grid Infrastructure
- Application Clusters, In-Memory Data Grid, Common Metadata Services

Development Tools
- Unified SOA Development Tool & Framework

Enterprise Management
- Provisioning, Diagnostics, Tuning, Configuration Management

Identity Management
- Provisioning, Access Management, Federation, Audit, Directory
Program Agenda

- Web 2.0
- Heterogeneous Applications Environments
- WebCenter for “next generation” Interfaces
- Enterprise Mash-up. Bringing Applications together.
Next Generation Applications

Web 2.0

Social Networks
What is Web 2.0?

Not a new technology, but a new mindset.

- Web 2.0 is the combination of three distinct avenues of Web Design:
  - RIA (Rich Internet Applications)
  - Loosely Coupled Applications
  - Collaboration / Relationship based web-experience
Rich Internet Applications (RIA)

• Web Applications that have the features & functions of Client/Server style applications.
• RIA Implement:
  • Client side processing to allow richer more responsive UI than traditional Web Applications
  • Asynchronous communication with the server (generally AJAX) allowing for screen refresh without requiring full page refresh
  • Greater Network efficiency as only the required data travels the network
**Mash-up**

**Mash-up**
- A web based application that combines data from more than one disparate sources into a single integrated service.

**“Enterprise Mash-up”**
- The term for Web applications that combine content from more than one enterprise information source into an integrated experience.
  - Includes the integration of structured & unstructured data from such sources as ERP applications, Content Management, Collaborative services.

**“Service-oriented business applications (SOBAs)”**
- Compound applications composed of services in a declarative manner.
Collaborative Web

Primary characteristic of the Web 2.0 Platform.

• Ability for users to contribute to, and collaborate on, the nature of information and how it relates to their needs.
• Social Networking allows users to define relationships with others to optimize the access to, and use of the available information.

Implemented via technologies such as;
• Wiki, Discussions, Tag Clouds, Blogs, RSS feeds
Program Agenda

- Web 2.0
- Heterogeneous Applications Environments
- WebCenter for “next generation” Interfaces
- Enterprise Mash-up. Bringing Applications together.
Heterogeneous Software Environment

- Few organizations are homogenous with their business applications.
- Software Purchases by different LOBs
  - Consolidation of companies
  - Business Partners
- Each have different User Interfaces & processes.
- Applications & data are functional islands.

Different LOB’s buy “best of breed”
Siloed Application Environments
Make Change Difficult

- Orchestration of the business process is driven by the user.
  - inconsistent and error prone
- Process logic is often duplicated across the application stack.
- Changing the process can be complicated, risky and often costly.
User Interaction

Individual tasks transcend a single application

• User must access multiple applications to complete task.
• User must retain the “transaction context” as they move from application to application.
Overlay Application Requirement

Single Application Interface across applications.

- Compound Application brings the disparate applications together.
- User can see the transaction context across applications, allowing them to focus on the business process.
Program Agenda

- Web 2.0
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Oracle WebCenter

- A new platform for user interaction
- Combines the best of:
  - Portals (portlets, customization)
  - Rich client development frameworks
  - Web 2.0 Collaborative & Content Services
- SOA enabled, hot-pluggable
- Supports the latest Java UI standards: JSF, JSR-227, JSR-168, JCR 1.0
- Foundation for Fusion Applications
WebCenter Suite 11g Architecture

WebCenter Composer
- Page Editing
- Business Rules
- Process Customization
- Notifications / Preferences

WebCenter Spaces
- Personal Spaces
- Group Spaces
- Taskflow Integration
- Application Navigation
- Global Worklist

Fusion Applications

WebCenter Enabled Applications

WebCenter Anywhere
- Desktop
- Wireless
- Voice
- MS Office

WebCenter Services
- Content
- Events
- Announcements
- WebConference
- Discussion
- Wiki
- RSS
- Mail
- VOIP
- Presence/IM
- Relationships
- Notes
- Search
- Lists
- Tasks

JDev

WebCenter Framework
- Portlet Runtime
- Content Integration
- JSF Portlet Bridge
- Customizable components
- Resource Catalog

ADF
- JSF
- AJAX
- Active Data
- Taskflow

Application Server 11g
Bringing a new UI to Applications Unlimited

- Allows for development of Web 2.0 style interfaces over the “Applications Unlimited” back end structures/processes.
Enterprise Mashup Services
Oracle Fusion Middleware and WebCenter

Notifications

Email

Discussions

Documents

Communities

Preferences

Search

Recent

Favorites

Presence

Contextual Wiring
Program Agenda

- Web 2.0
- Heterogeneous Applications Environments
- WebCenter for “next generation” Interfaces
- Enterprise Mash-up: Bringing Applications together.
“Applications Unlimited” Integration
Keeping transaction context.

• “Task” Integration across different “Applications Unlimited” suite applications is 2-fold.
  • “Back-End Integration”
    • Data Transformation and Routing
    • Process Orchestration
  • “On The Glass” Integration.
    • Compound Applications allow the user to see context and process accordingly.

• Both are ultimately required!!
BPEL, The Orchestrator
Orchestrate & Transform

WebCenter Application

J2EE

3rd Party

BPEL

Web Service

Java Service

Database

Stored Procedures

ERP

SAP, Oracle, etc.

User Tasks
Transactions often require user input/approval.
Enterprise Service Bus
Connect & Route - Expose Everything As A Web-Service
Oracle Application Integration Architecture

Simplifies the implementation of SOA

- **Best Practice Industry Reference Models**: Optimize business performance by using documented industry best practices processes

- **Pre-built, Process Integration Packs**: Quickly integrate Oracle Applications to create the business processes you need, without the risk

- **Open Standards Architecture for Innovation**: Accelerate time to value through a pre-built SOA

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**Oracle Application Integration Architecture**

**Best Practice Industry Processes**
- Order to Cash
- Procure to Pay
- Hire to Fire
- Account Opening & Service
- And more...

**Pre-built Sustainable Integrations**
- Opportunity to Quote
- Order to Cash
- Banking Origination & Fulfillment
- Adverse Event Reporting
- Trade Promotions & Deductions
- Financial Services Hub
- Additional Ones Planned...

**Open Standards Based Architecture**
AIA - Order to Cash
End to End Business Process Management

Integrated Order Lifecycle between Front and Back Office Systems in Real Time

Siebel CRM Integration Pack for Oracle E-Business Suite Order Management
Overlay Web 2.0 on “Orders-to-Cash”
WebCenter is the “face” of SOA

The WebCenter Framework allows for disparate application services to be loosely coupled, within a single User Interface, to form a new application.

Different LOB’s buy “best of breed”
Compound Application
Exposing Application Components

- The end-user sees the transaction “in Context” within the one screen.
  - Focus on the task in hand.
- Allows for overlay of Web2.0 features onto the transaction.
ERP Integration into a WebCenter Application

1. Web-Services Data-Control
   - Native Application WebService
   - Middle-tier (SOA) based solution to act as the WS
     - BPEL, ESB
   - Automated Binding of UI from Data-Control

2. Portlets
   - Predominately WSRP based Portlets
   - Expose ADF components via JSF Portlet bridge.
Exposing Application Data in WebCenter

Calling a Web-Service.

Direct ADF integration

- If Web-Service returns scalar data-types create Data-Control directly from web-service
- Expose Return values as “bound” ADF components
Proxy Through SOA Middle Tier (transform)

- **Integration via ESB**: Route & Transform the data to reflect the UI requirements
- **Integration via BPEL process**: If more complex orchestration or transformation is required.

Expose SOA middle-tier components as Web-Service which is consumed in a Data-Control.
Exposing Application Data in WebCenter

Calling a Web-Service.

Application Adapters

- Exposes the lower level application "Business Objects"
  - Supports multiple Application interfaces
- Allows for the definition of a web service
  - Subsequently transformed and exposed via ESB/BPEL
- Data-Control built against middle-tier SOA component.
SOA Integration
Leveraging SOA platform for Web2.0

WebCenter Enabled Applications
- Unified Worklists
- Activity Guides
- Custom UI

WebCenter Processes
- User Mgmt
- Content Approvals
- Community Subscriptions

BPEL / Human Workflow

OWSM / ESB / SOA

JDeveloper / Composer

CRM

SCM

Financials
Oracle WebCenter Portlet Framework
Integrate Enterprise Applications

Integrate Applications

WSRP (Portlets)
SAP iViews
Web Clipping
Adapters

Custom Applications
Mainframe

JSR-168, WSRP
Bind Portlets to WebCenter Applications
Add at Design Time & Runtime*
Portlets as part of Web2.0 UI

Applications Unlimited content exposed directly in Web2.0 based UI
Oracle Applications Unlimited
Certified with Oracle WebCenter Suite

• Now Available – Enterprise Portal
  • E-Business Suite: DBI (11i, 12.0)
  • PeopleSoft: Certified 8.45+, 9.0; also PeopleSoft Portal
  • Siebel CRM: Certified 7.8.2+; also 8.0
  • Siebel Analytics: 7.8+, 10gR3

• Imaging & Process Management
  • E-Business Suite: 11.5+, includes 12.0
  • PeopleSoft: Certified 8.4+; also 9.0
  • JD Edwards Enterprise: Certified 8.9x+
  • JD Edwards World: A 9.1
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