IBM Workplace Client Technology
Powering Managed Client Solutions

Richard Wilson, Architect
IBM Lotus Workplace Development
Richard_Wilson@us.ibm.com
Agenda

- IBM Workplace Client Technology Platform Overview
- Lotus and Eclipse Working Together
- Managed Application Examples
- High-level Architecture Overview
- Demo
- Forward Pointers
- Summary
- Q&A
IBM Workplace Client Technology

**Goal:** Provide an Eclipse-derived enterprise platform with reusable components and services to support applications built by IBM, end customers and other providers.

**Themes**
- Component Reuse
- Embrace and Extend
- Shared Platform
- WebSphere Affinity
- Client Services

**Design Principles**
- Use what Eclipse provides
- Extend rather than modify
- Work closely with Eclipse team
- Avoid forking code bases
- Propose back to Eclipse core
Motivation – Beyond the Browser

- Desktop and OS Integration
  - Full participation to operating system UI infrastructure, events and metaphors
- Highly-interactive extensible platform
  - Client-side processing and caching
  - More responsive user experience
  - Lower server loads
  - Offline execution
  - Local data access
- All this with administration characteristics of a web experience
  - Central server-based application provisioning and policy
  - All the usual benefits associated with Portal application management
  - Now also applied to desktop applications
- Low total cost of ownership
How does the platform achieve a low TCO?

- Provides central management and specification of client configuration
  - Users are provisioned on server
  - Applications are defined on server
  - Services are run on server
  - Access control is applied on server
- Employs a componentized client infrastructure and application components
- Leverages update manager for retrieving the component configuration set
- Supports downloadable components for new and upgrade installs
- Limits access to those components that a user has been granted permission to use
- Offers a management system that overlaps with that of the browser
IBM Workplace Client Technology

- Provides extension services layer for Eclipse RCP
- Extends the enterprise managed environment to the end user device
- Targeted for use across IBM
- Platform for custom applications
- Self-provisioning Managed Client
  - Client configuration defined on server
- Low Total Cost of Ownership
  - Centrally managed aggregation and deployment
- Cross Platform
  - Linux is fully supported
- Rich Set of Client Services
  - Robust programming model
Benefit: Eclipse as Foundation

- Cross platform, rich UI widget set based on native widgets
- Rich UI framework
- Predefined dialog basis: Wizards, Preferences, Properties
- Other UI: Perspectives, Views, Editors, Workbench (as a base)
- ActiveX support in SWT on Win32 (platform integration)
- Help system

- Extensible Platform
  - Plug-in extensibility model
  - Shared programming model with tools development
  - Education already developed for tools offerings
  - Core services, extension points
  - Core frameworks

- Production quality platform with 2 major releases in market
- Open Source code base
Lotus and Eclipse Working Together

- Lotus joined the Equinox Technology Project and is contributing in the following areas:
  - Alternative Runtime
  - Dynamic Plug-in support
  - Dynamic component provisioning
  - Security Models

- Lotus is contributing code in Eclipse 3.0 toward the RCP theme
  - Support for general desktop applications
  - New application focused UI components
  - Enhanced Workbench customization
  - Dynamic UI components
Lotus Workplace

- Lotus Workplace -- a new innovation for collaboration and human interaction
  - Improved responsiveness
  - Improved productivity
  - Reduces Total Cost of Ownership
  - Connects Geographically Dispersed Teams
- Workplace server is based on WebSphere Portal and DB2
- Diverse customer base requires more than one client type
  - Browser, Rich Client, and Mobile
- Workplace applications can be projected to multiple client device types
Client Integrator

Based on IBM Workplace Client Platform

- Locked-down desktop with managed applications
- Cross-platform – will support Windows and Linux
- Native look-and-feel through eclipse SWT widgets
- “Dashboard” launcher provides admin controlled access to local applications and system functions on client (e.g. screen lock, logoff, shutdown, etc)
- Provides an admin-controlled restricted browsing environment
  - Kiosk-mode to “simple” browser UI (basic navigation controls)
- Will allow seamless integration of Lotus Workplace 2.x components into the CI desktop
  - E-mail and Collaboration
Client Integrator Application
Architecture Overview
IBM Workplace Client Technology Conceptual Stack

IBM Workplace Client Technology Platform and Applications

- Mail
- Docs
- ...

Workplace Shared Application Components

- Generic UI Components
- Extension Services
- Generic Contributions
- Core Platform and Frameworks

Workplace Applications

Workplace Platform Extensions

Eclipse RCP
Eclipse RCP and Lotus Generic Contributions Layer

- This is a layer for any Lotus add-on generic components that are in the proposal pipeline for inclusion in a future Eclipse release.

- Examples of work areas include:
  - System tray integration
  - Alert Bubble integrated to desktop
  - Generalized status bar
  - Post-install configuration
  - Workbench themes
  - Multi-view instancing
  - Action bar with custom rendered buttons
  - Locked-down desktop
  - Dynamic plug-ins
Extension Services Layer

- Lotus enterprise client value-add services reside in this layer. Many client extensions have server counterparts.

- Example services include:
  - Portal Integration
  - Remote Preferences
  - Credential Store
  - Single Sign-on with the Operating System
  - Managed Store
  - WSRP Consumer
  - WMM
  - J2EE Client Container and Services
  - Replication
  -Disconnected Support
Generic UI Components

- UI components that reside in this layer are generic, tie into extension services, and can be used in applications built by IBM, end customers and other providers.

- Example components include:
  - WSRP Viewer
  - RTE based on SWT Browser
  - Managed Store Explorer Viewer
  - Live Names
  - View Intercommunication (client-side broker)
  - Custom Table Widget
IBM Workplace Client Technology
Platform High-level Architecture

Business Component Projection

IBM Workplace Client Technology Platform

- Update Manager
- Help
- Preferences
- Workbench
- JFace
- SWT
- Alerts
- Cred Store
- Logging
- WMM
- App Manager
- Service Locator
- Portal Integration

Platform Runtime

JRE

J2EE Client Container

Operating System

- Selected Dependent Eclipse plugins
- Selected new Workplace Client Technology Platform Plugins
Workplace Business Component Projection Example

**Calendar BC Projection**

- Calendar Feature
  - Calendar Help Plugin
    - Calendar Help
      - English Fragment
    - French Fragment
    - Spanish Fragment
  - Table of Contents
  - Topics
  - HTML Docs
- Calendar UI Plugin
  - Default Perspective
  - Week View
  - Month View
  - Day View
  - Event Editor
  - Preferences UI Pages
  - Menu

**User Tier**

- Provides Extension To
  - Selected Dependent Eclipse plugins
  - Selected new Workplace Client Technology Platform Plugins

**Workspace Tier**

- Calendar Workspace Plugin
  - Calendar Service Stubs
  - Value Object Cache
  - Calendar Event Processor

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IBM Workplace Client Technology Platform

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Platform Runtime

JRE

J2EE Client Container
IBM Workplace Client Technology Component Provisioning

**Use cases**
- Add new plug-ins dynamically at runtime without a restart
  - Additive update model – hot deploy
- Update plug-ins dynamically at runtime
  - Replacement update model – hot swap
- Policy and Options
  - Silent install
  - Push install
  - Background install
  - Update scheduling

**Alternative Solutions**
- The standard Eclipse Update Manager
- Tivoli management solution
Driving Workplace Client Configuration from Portal

- Portal has a robust and powerful programming model
  - Leverage portal and programming model to drive client
  - Pages map to Workbench perspectives
  - Portlets map to Workbench views

- Application manager requests pages and coordinates update and perspective creation
- Portal generates component assembly markup for new client device type
- Update manager is consulted to ensure required components are available on the client
- Dynamic perspectives are created based on markup and rendered for use
Example Component Provisioning Communication

- Application manager request client configuration from server
- Update is run to fetch new and updated components
- Services are used to access and update data on the back end
- Perspectives are dynamically built and rendered to user
Demo
Resources

- Eclipse.org – [www.eclipse.org](http://www.eclipse.org)
Summary: IBM Workplace Client Technology

- Self-provisioning Managed Client
  - Client configuration defined on server
- Low Total Cost of Ownership
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Q & A