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le couple gagnant.

IBM SOA Summit

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TA92 SOA: Une architecture jusqu'au poste de travail

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Agenda

At the quest of a new Rich Client Platform ?
Extend the SOA beyond the Data Center

Lotus Expeditor

Architecture

Samples

Enter SOA – Services Oriented Architecture

… a service?

A **repeatable business task** – e.g., check customer credit; open new account

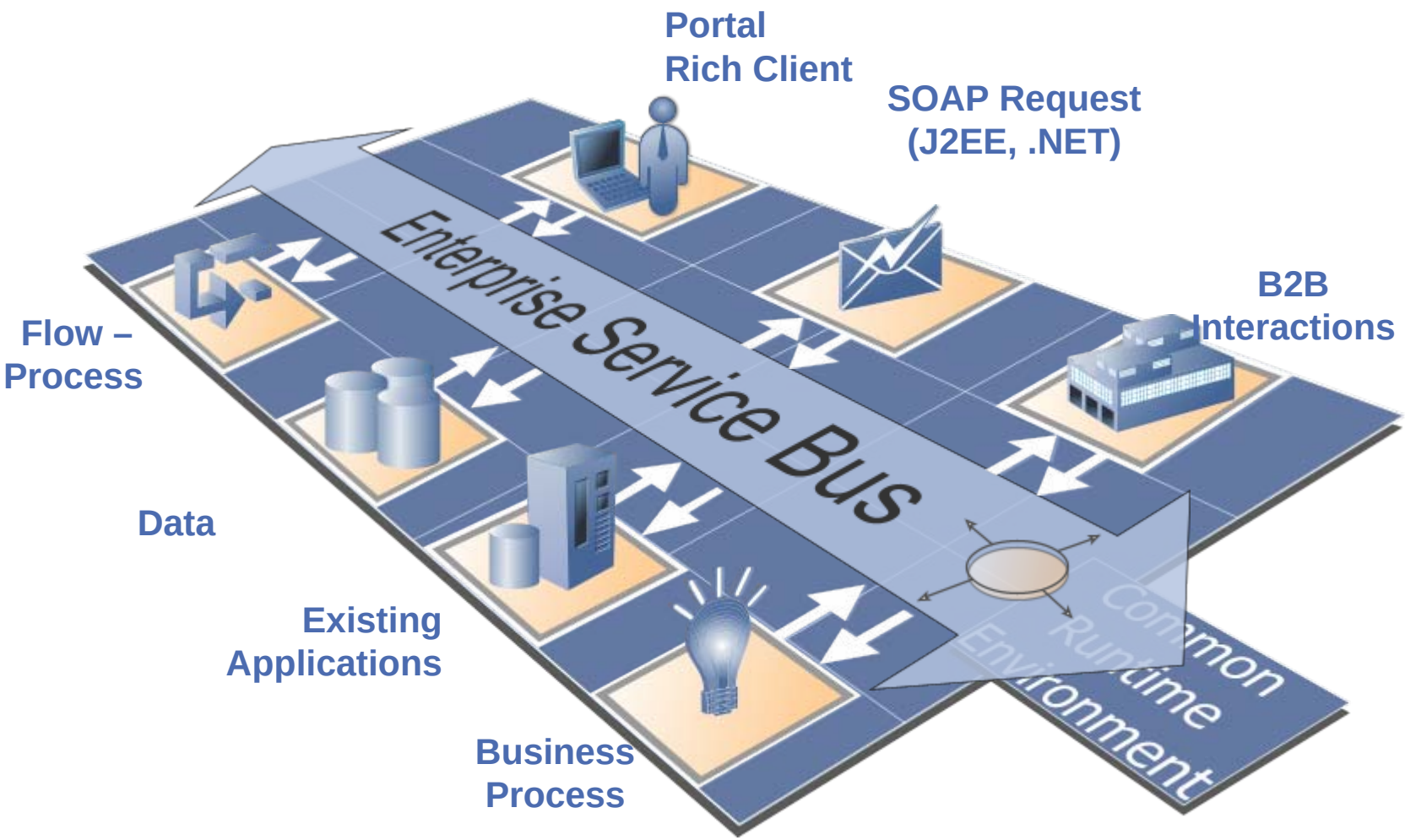
… service oriented architecture (SOA)?

An IT **architectural style** that supports integrating your business as linked services

"SOA impacts every aspect of IT and business."

Gartner

SOA & User Interaction



Enterprise Portals Represent a Compelling *First* SOA Project

"Through 2007, an ***enterprise portal*** ***will be the first major application of SOA*** *concepts for* ***more than 50 percent of enterprises*** *(0.6 probability)."*

Analytical source: Gene Phifer, Gartner Research;
Publication Date: 12 October 2005/ID Number: G00132930 Gartner 10/12/05

Extend SOA beyond the Data Center (the “Edge”)

Customer Reasons for shift to Rich Clients

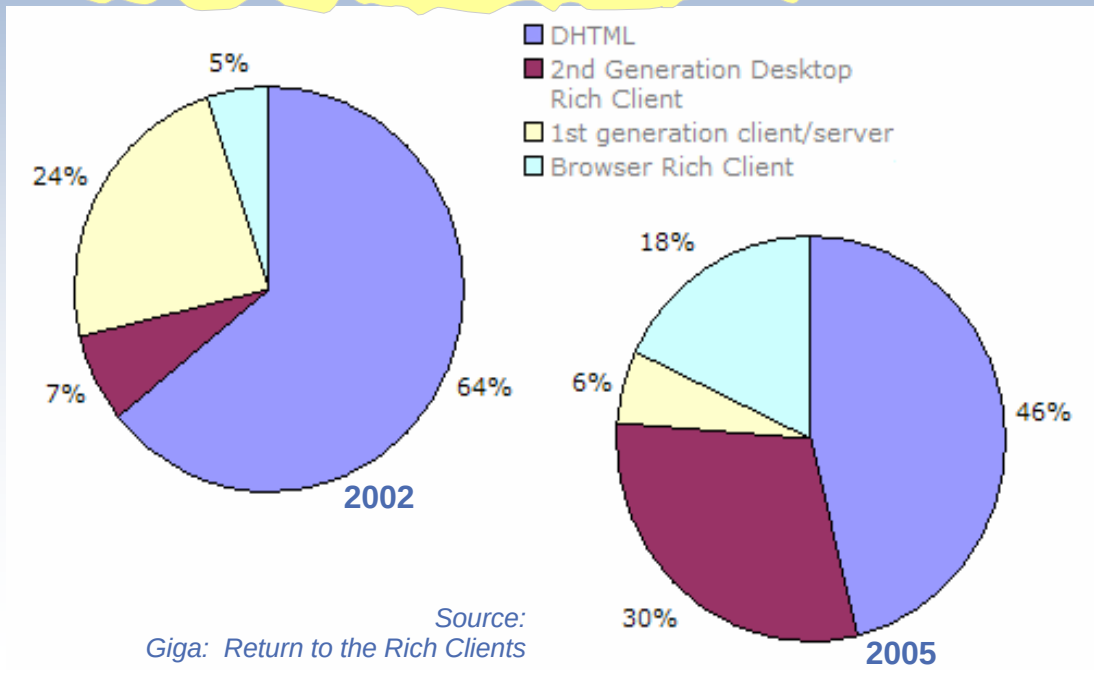
- Better (faster and consistent) response time on the Web based UI
- "Richer" UI than available in a Browser
- Ability to integrate existing "Client based" applications into their web applications
- Local business process execution (enabling mobility if needed)

Gartner

“...Growing trend back from browser-based thin clients to something in the middle – richer, smart clients...”

Giga

48% of future enterprise desktops deployed will be rich clients...



Source: Giga: Return to the Rich Clients

“Good things” we learned from the past

- **Insulation from the native Operating System**
  - The **browser** is a device which allows a web page to be displayed (and executed…) independently from the underlying Operating System
  - The browser provides an **execution shell**
- **Role-based interaction**
  - Most browser-based applications deliver content based on the user profile
  - A “**portal**” is very good in Identification, Authorization and Authentication
- **Role-based aggregation**
  - Most modern browser interface provide content coming from aggregating different sources
  - A “**portal**” is very good in Aggregating information
- **Zero Management**
  - The last version of an application is always delivered…
  - … the browser “cache” plays a nice role
- **Zero-footprint**
  - The browser **itself** is not “zero footprint”…
  - … but the browser-applications are !

Rich Client – Common Concepts

- **Establish a "Client-side Container" that**
  - ✓ Insulates from the Operating System
  - ✓ Provides added-value services
  - ✓ Defines a framework onto which to provide applications
  - ✓ Rich desktop user experience and platform independence

- **High-performance extensible platform**
  - ✓ Client-side processing and caching
  - ✓ More responsive user experience
  - ✓ Lower server loads
  - ✓ Local data access
  - ✓ Intermittently-connected mode

- **Provide 360º aggregation and integration**
  - Both with the server
  - … but also with local, native-client applications
  - … and with the "Internet" world !

- **… But with a "web-like" manageability model**
  - ✓ To avoid the high cost of deployment and management
  - ✓ Central server-based application provisioning and policy

Design Considerations

- **Topology**
  - Target device(s) (desktop, mobile device, or both)
  - Device capabilities (processor speed, memory, form factor)
  - Connectivity (always, intermittent, never or rarely)
  - Network capabilities (speed, cost, reliability)

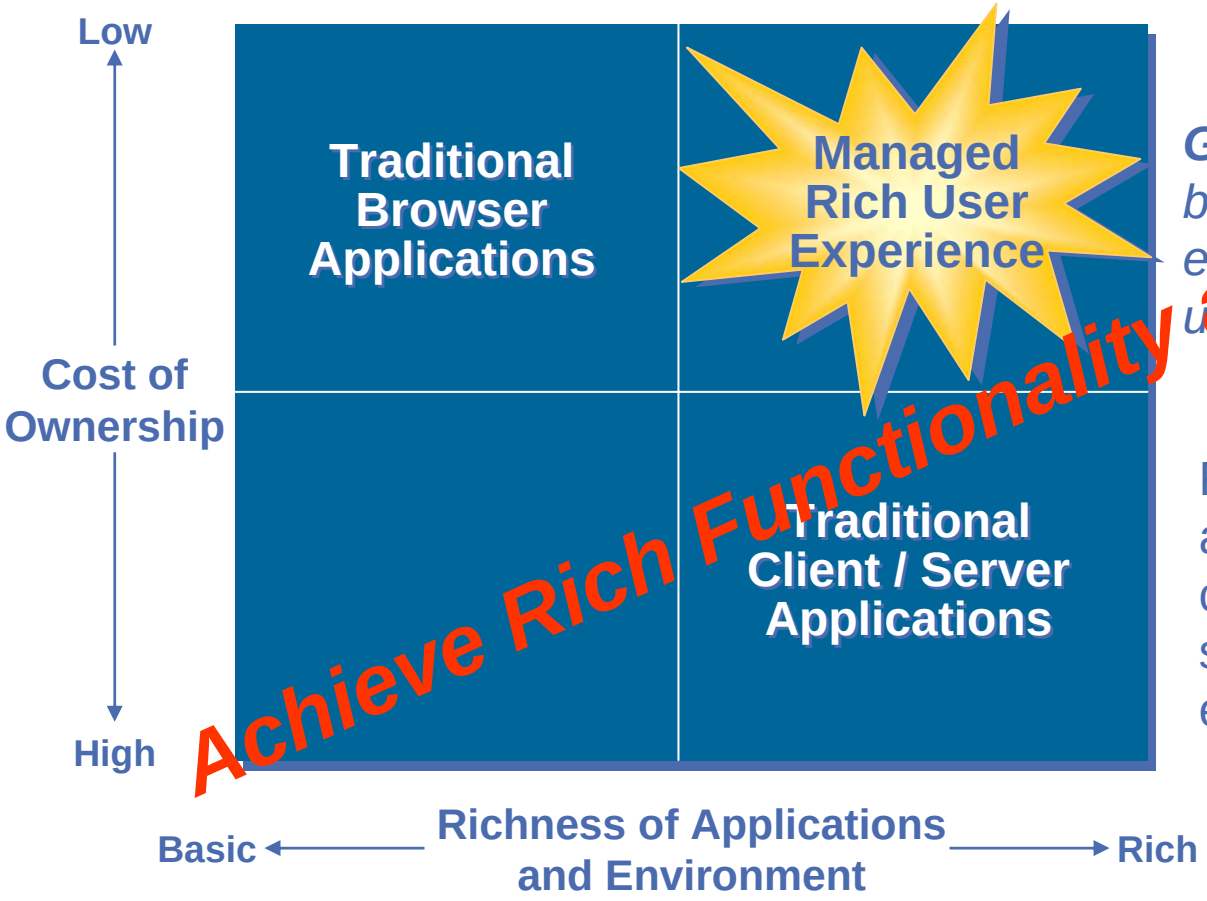
- **Interaction**
  - Web or portlet user interface
  - Rich client application (GUI) user interface
  - Service-only (i.e. no user interface aka “headless”)

- **Business logic**
  - Online vs. offline operation
  - Distribution across tiers
  - Reusability across applications (and devices)

Design Considerations (continued)

- **Persistence**
  - Online vs. offline operation
  - Local data organization and access
  - Local data protection (if any)
  - Synchronization and conflict resolution
  - Amount and frequency of data distribution
  - Configuration
- **Messaging**
  - Online vs. offline operation
  - Security
  - Synchronous vs. asynchronous messaging
  - Transactional, event-driven, web services
  - Configuration
- **Management**
  - Componentization and distribution
  - Data formats
- **Serviceability**

We took the challenge !



***Goal**: Rich portal-based applications enhanced with rich user experience*

Rich, Windows-centric applications with connection to network, server resources e.g. Office, Notes

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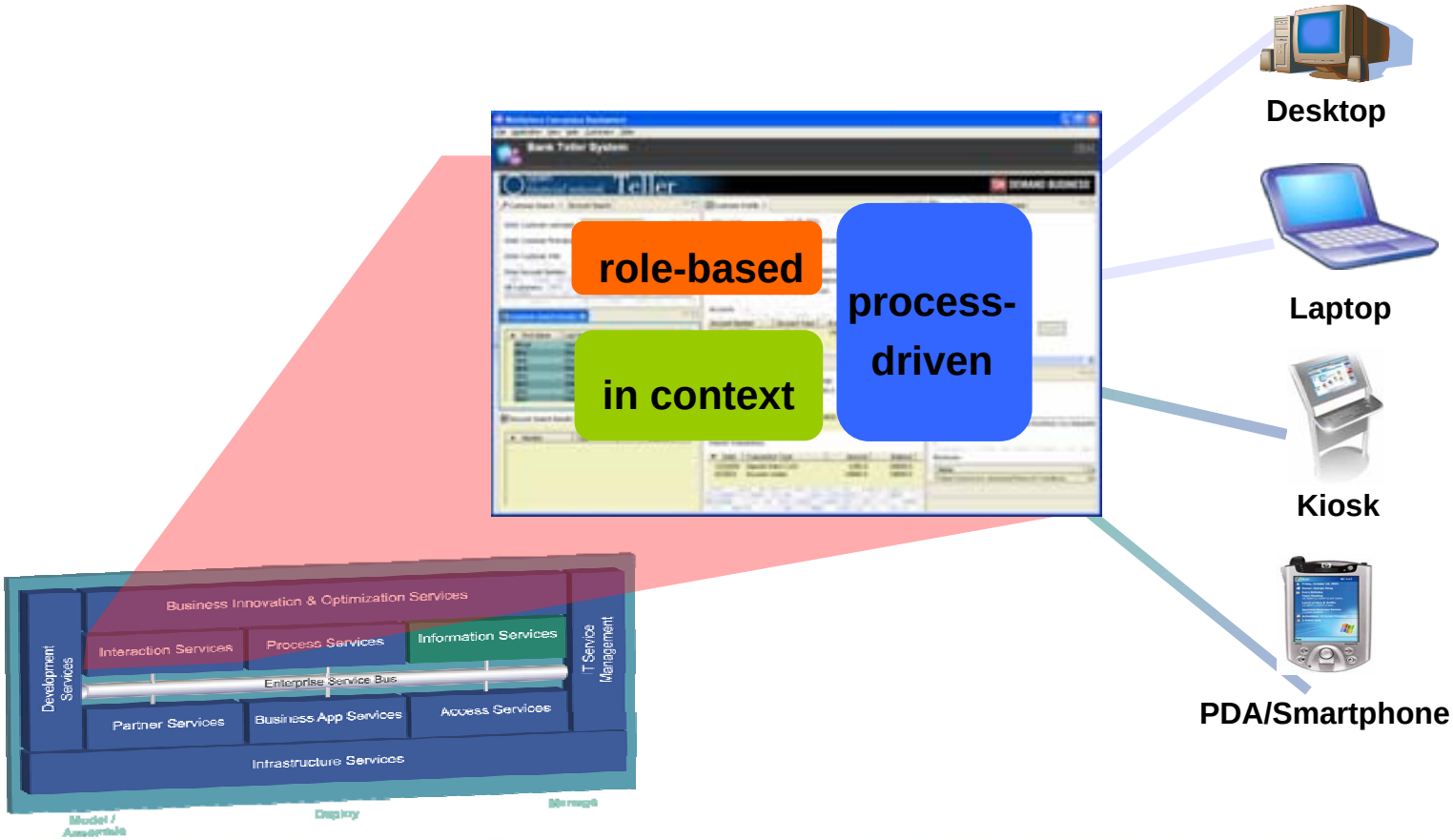
A Server Managed Client platform that extends SOA apps to desktops, laptops, kiosks and mobile devices



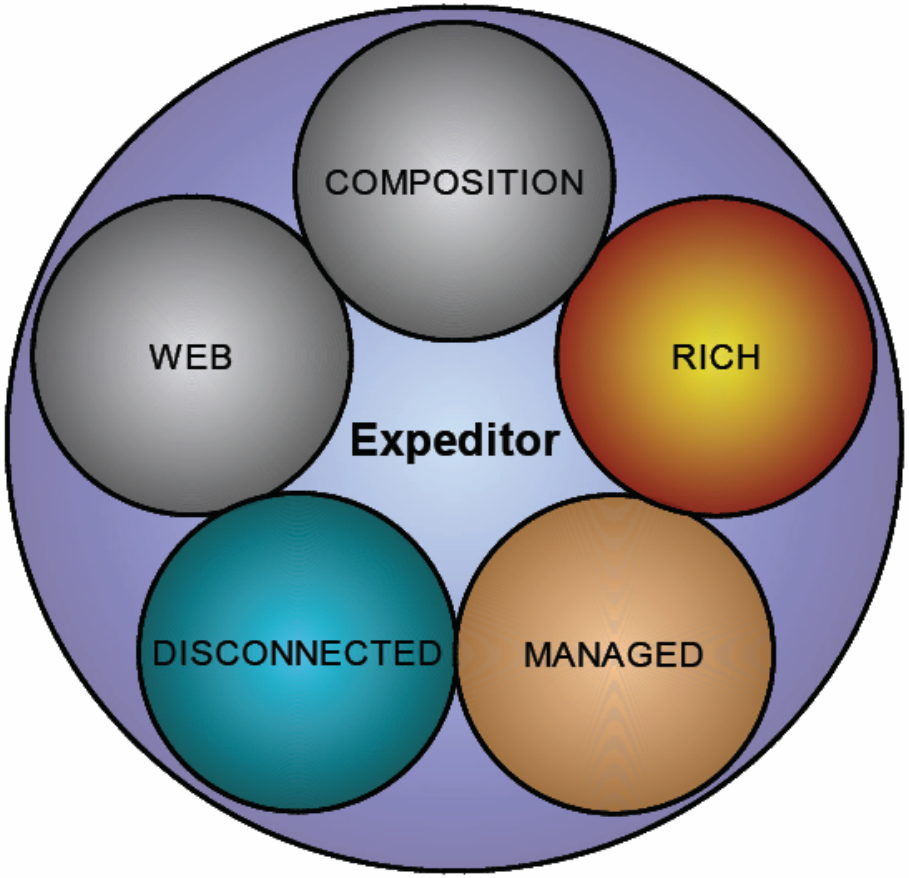
Lotus Expeditor

Increases responsiveness and improves end user productivity by accessing composite applications regardless of network connectivity

Call Center Agent	Bank Teller	Retail Kiosk	Knowledge Worker	Field Service
Look up Customer Info., suggest services, answer questions	Look up account Info. and transfer funds	Access product catalog	Access LOB applications	Fill out work orders

Always on / Always Connected — Semi-Connected

Key Aspects of Expeditor Client



"Extending SOA beyond the data center to People, Places, and Things"

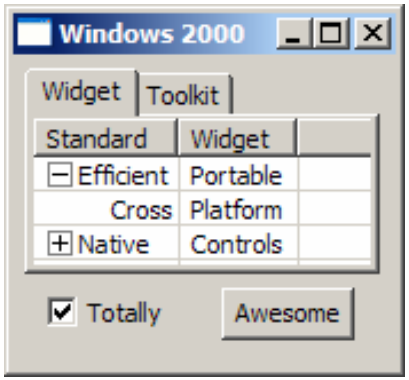
Lotus Expeditor: Web

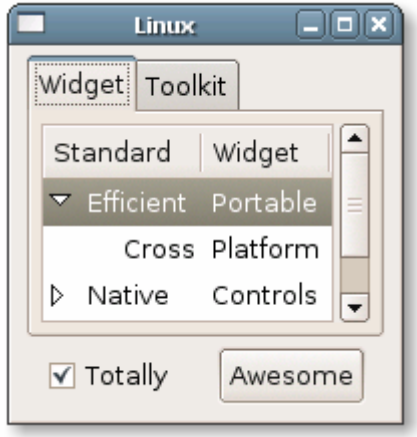
Enables web-based applications to become part of desktop

- **Support all full featured web content**
  - HTML + CSS + DHTML + JavaScript
  - Ajax (JWL, DoJo, Custom, Etc.)
- **Support Extensions**
  - “Common” Browser Plugins (e.g. Flash, PDF, etc.)
  - Applets
  - ActiveX Controls (Win2K, WinXP only)
- **Provide Lockdown Browser**
  - URL management
  - Access Control

Compelling user experience across platforms

- **Enable Platform native look and feel …**





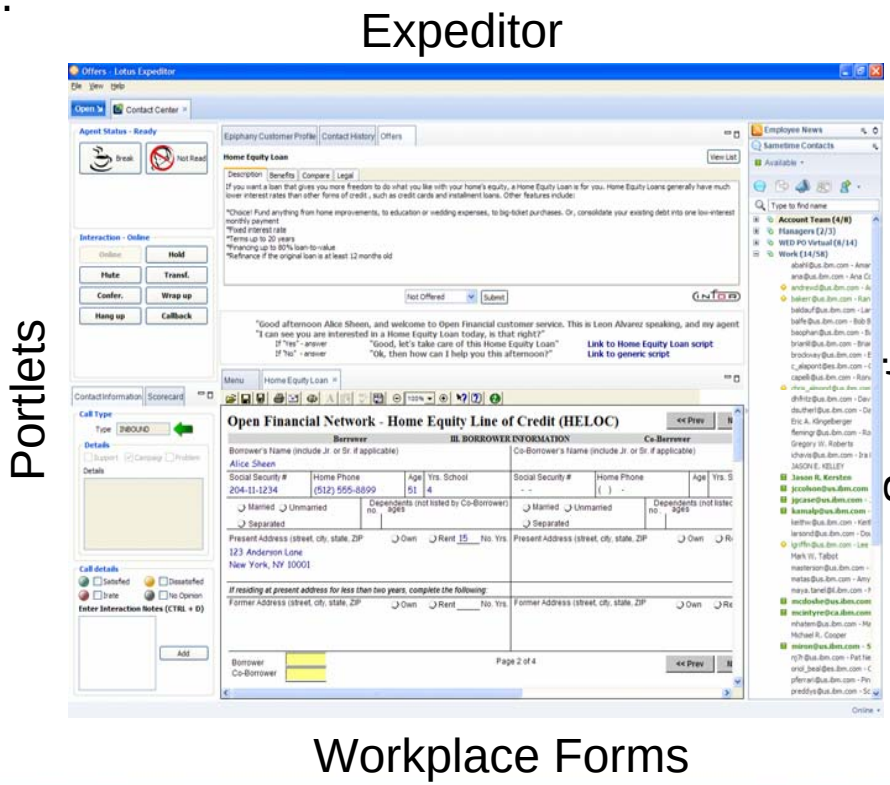
- **Enable Drag and Drop**
- **Enable Keyboard integration**
- **Enable 2D and Vector Graphics**
- **Enable Hardware Device Integration**
- **Enable protection from OS Level Changes**

Lotus Expeditor: Composition

Seamless Integration of client applications

- **Enable *"Mashups"* across pre-existing and new application types**
  - Swing, AWT, Native, .NET, Web, Portlet, Forms,
  - RCP, Flash/FLEX, Text Terminal, Etc.
  - Local data integration between apps
  - Local event integration between apps
  - Create new views on existing apps

- **Enable complete Desktop mgmt**
  - Optimize real estate
  - Control overall look and feel
  - Custom branding
  - Configurable access



Lotus Expeditor: Connections

- **Enable better responsiveness**
  - Minimal round trip to server(s)
- **Improve end to end scalability**
  - Locally hosted business logic
- **Enable transparent server interaction when server becomes available**
  - Outgoing - Complete transactions when connected
  - Incoming - Refresh/Update local content when connected
- **Enable mobility**
  - “Full” disconnected for long periods of time (i.e.: on an airplane)

Lotus Expeditor: Managed Client

Install, configure and maintain both the platform & the applications

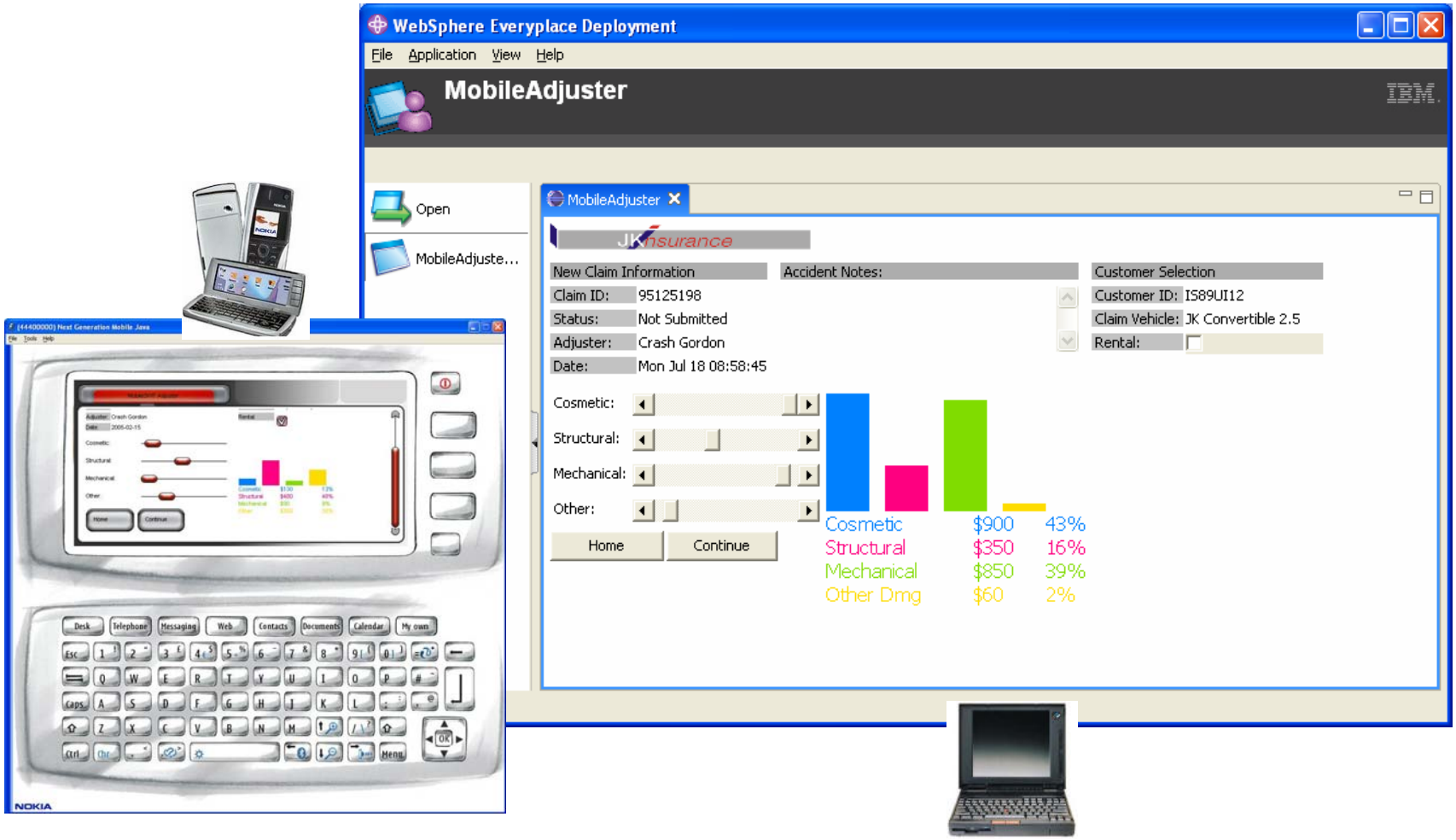
- **Enable flexible points of control**
  - One time setup; subsequent lockdown desktop
    - Lockdown browser (URL, Access Control, etc.)
    - Lockdown composite applications
  - Dynamic, self managed by end user
  - Dynamic centrally managed via server
    - Continue to maintain a lockdown user view of the system
  - Combinations of end user and central server managed

- **Enable central visibility**
  - Applications
  - Configurations
  - History, Inventory and Status

- **Enable remote access**
  - Administrator scheduled jobs on the client

Expeditor Mobile

The same value and services as desktop, enabled on mobile devices



Windows Mobile 5, Symbian

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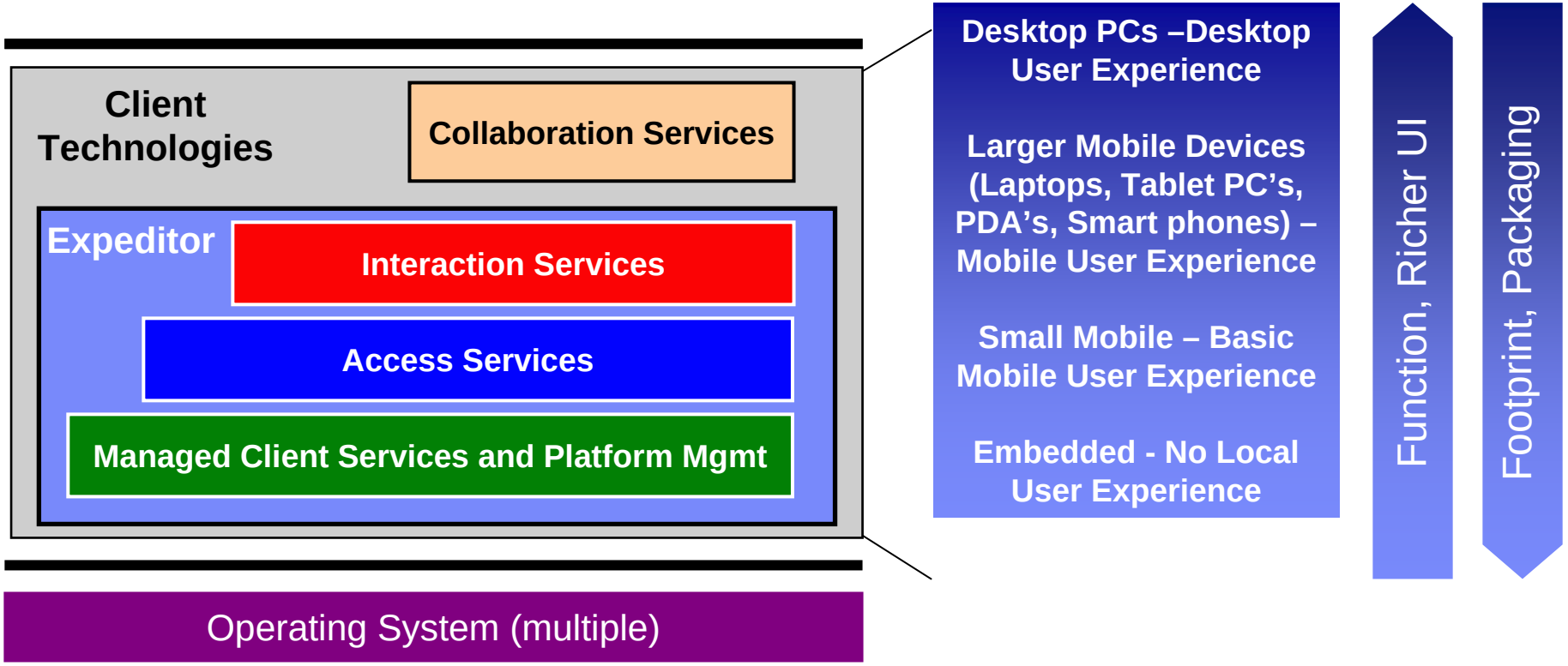
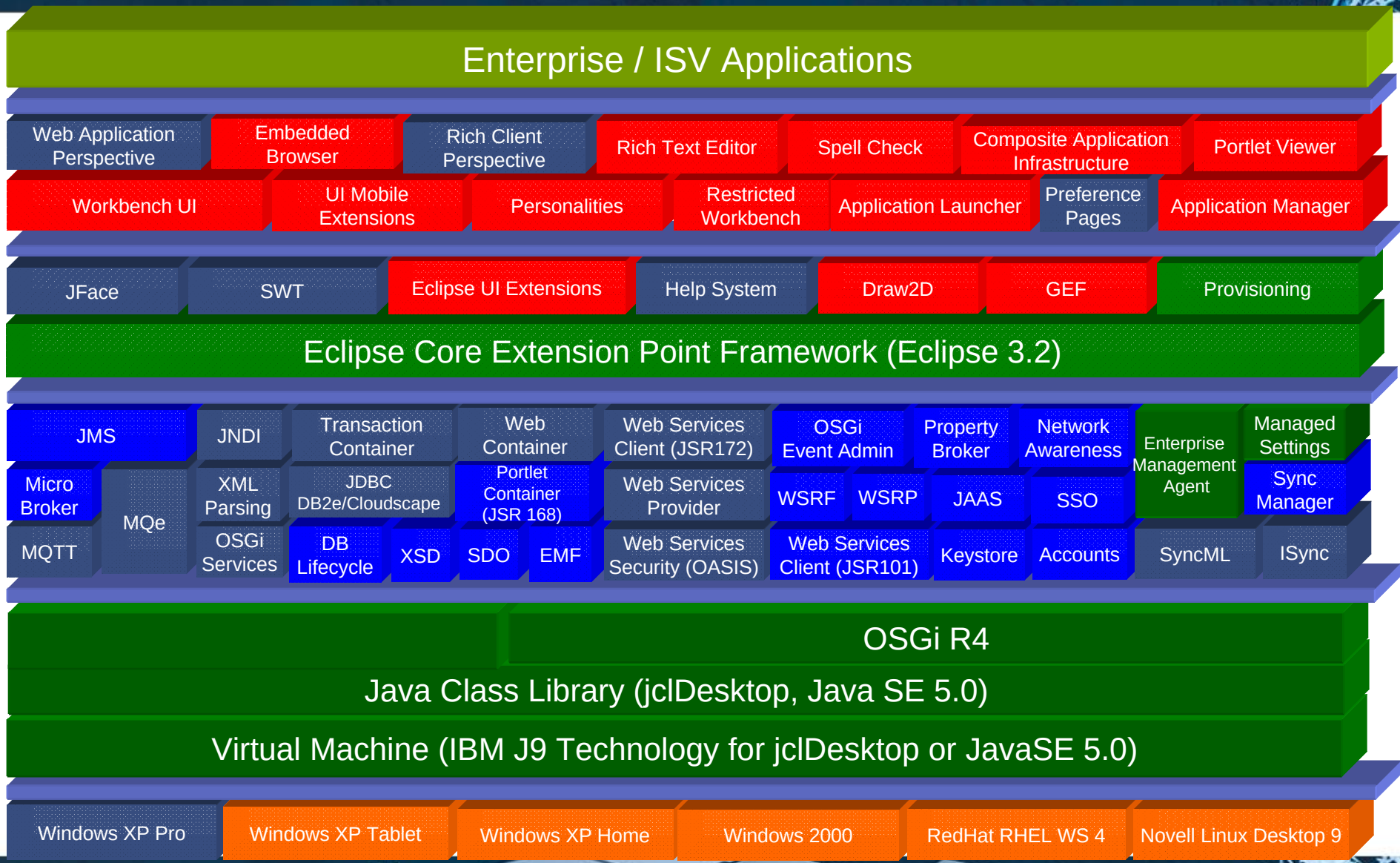
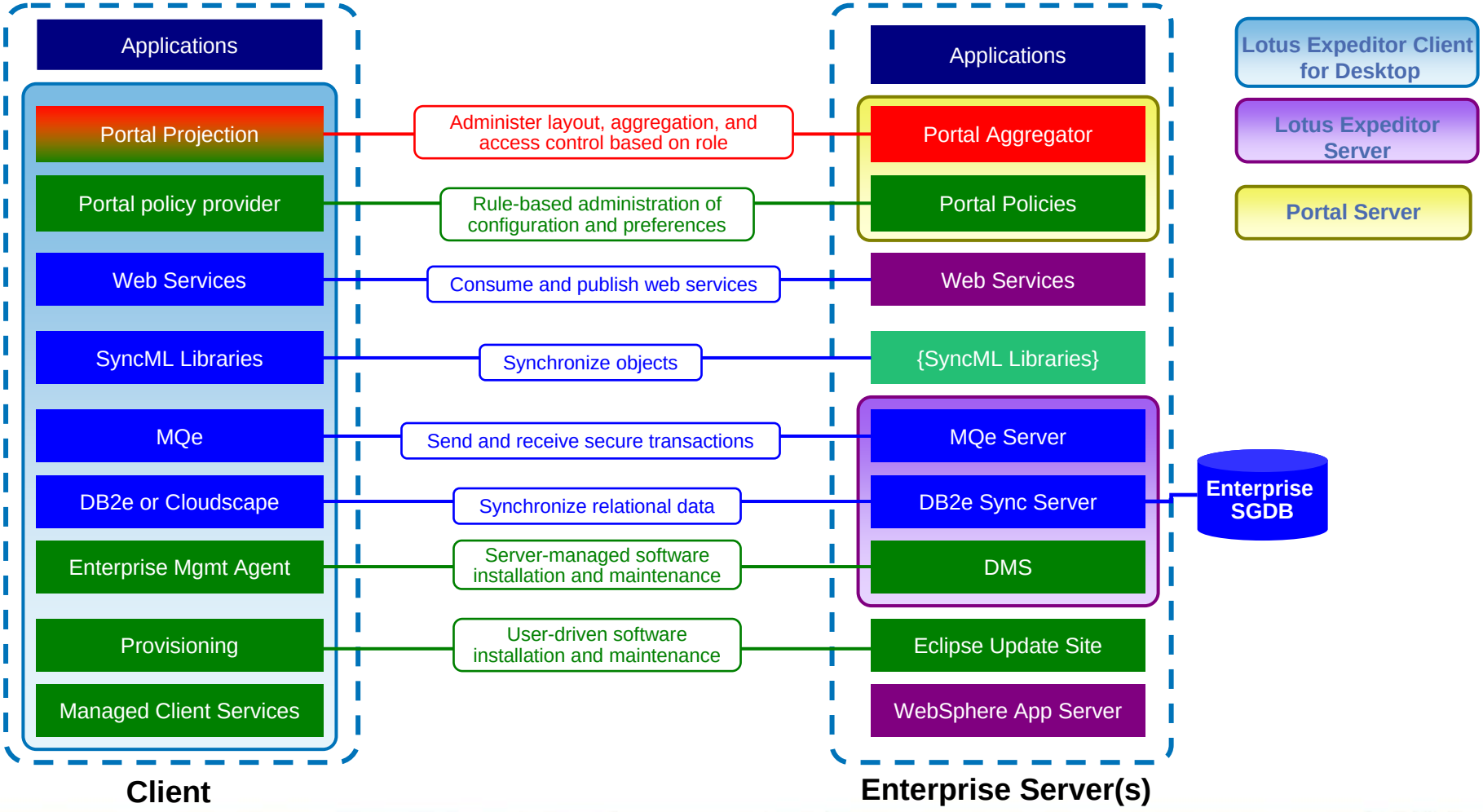
Foundation for Client Technologies



Client Architecture



End-to-End Connections with Expeditor and Portal servers



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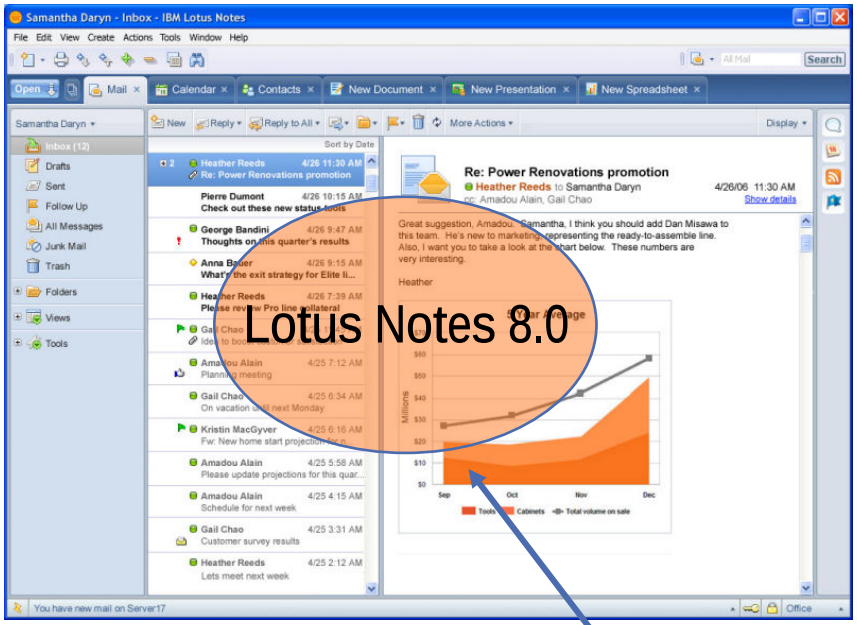
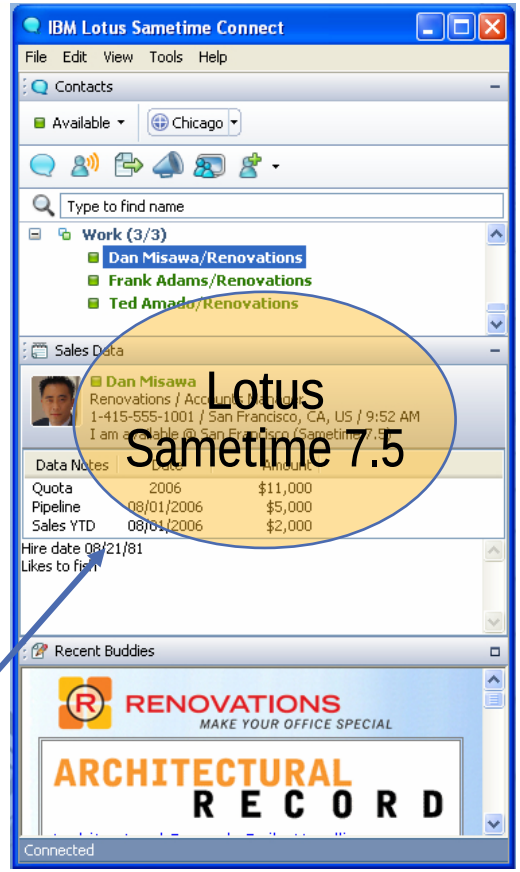
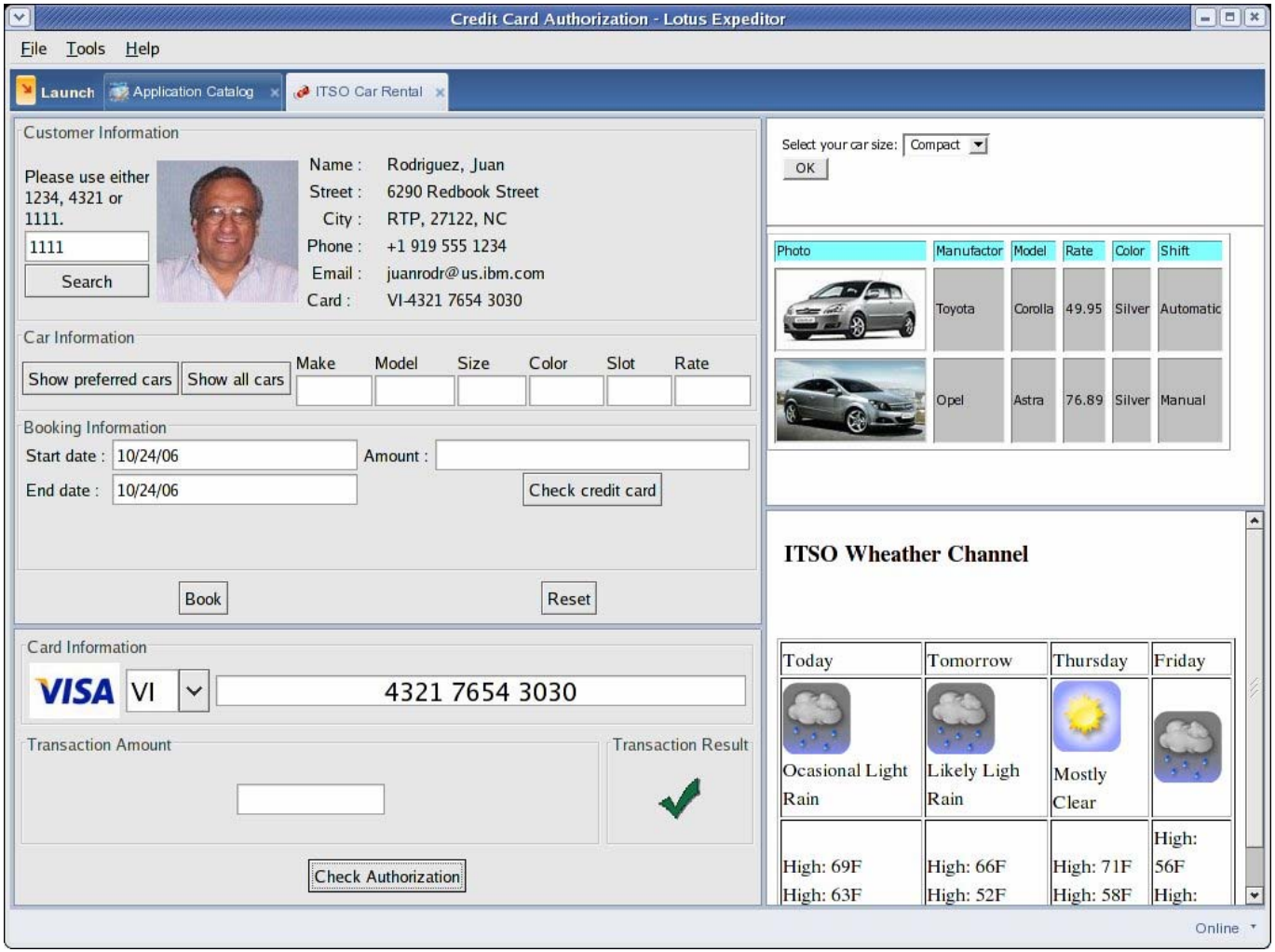
Lotus Expeditor – Core of Lotus Rich Clients



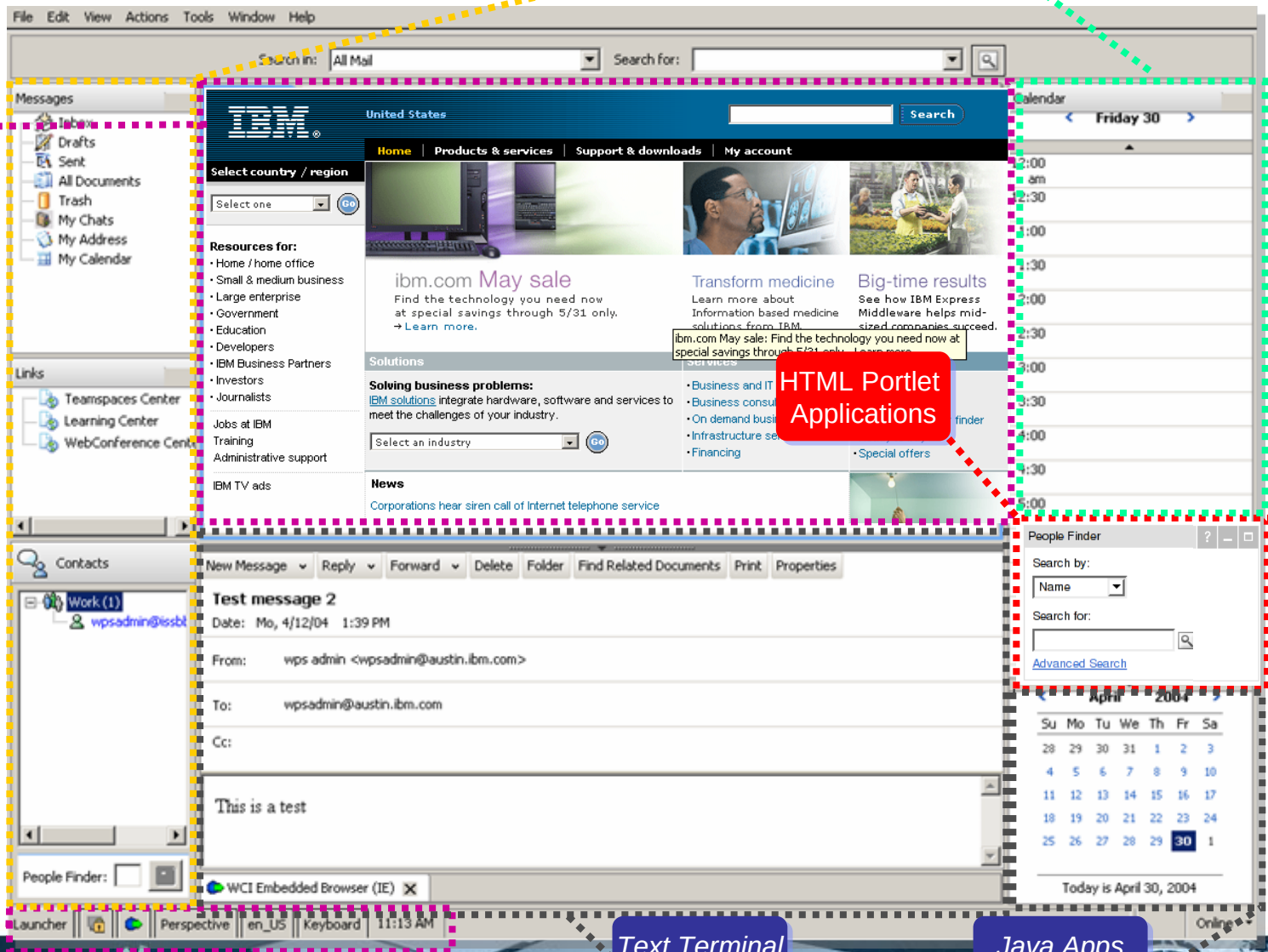


Lotus Expeditor

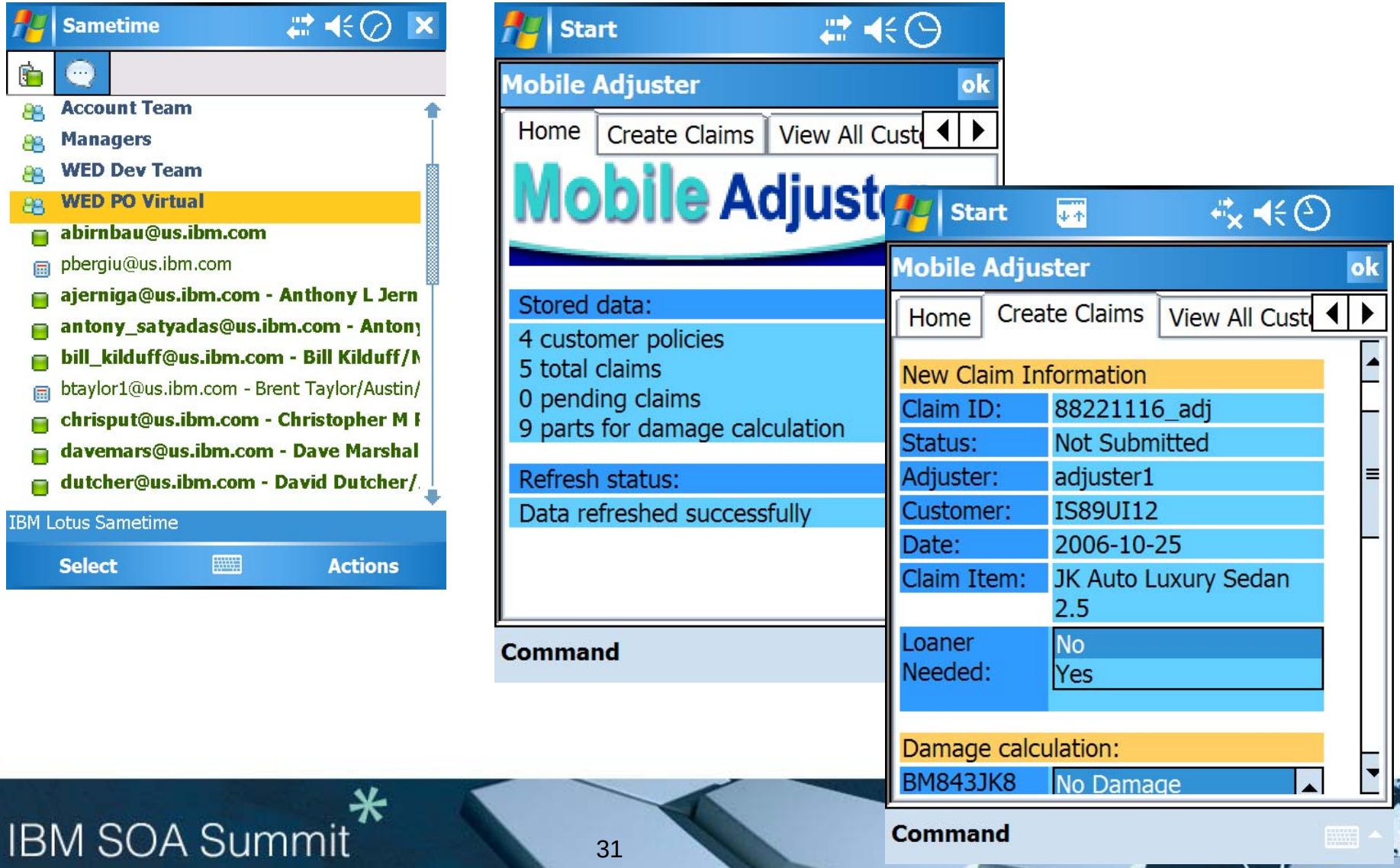
Composite Application



Desktop Integration



Expeditor for Devices



Our mission…

Make **more** people…
more productive…
in the **context** of what they do… **everyday**

IBM Managed Client !

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