

Rich Internet Application Market Overview

Ronald Schmelzer
Senior Analyst, ZapThink, LLC

zapthink

Copyright © 2004, ZapThink, LLC



Interface: Key to Application Usability



- Key Aspects of Interface:
 - Intuitiveness of Control and Navigation
 - Ease of ability to execute a task
 - Visual Appeal
 - Response Time
 - Number of steps to accomplish a goal
 - Interaction with other running applications

Copyright © 2004, ZapThink, LLC



Interfaces: Up to Now

- Host-based Interfaces – “Green Screens”
 - Task-oriented
 - Typically text-only
 - Highly functional
 - No local code
- Desktop and Client/Server Applications
 - Significant increase in UI capability
 - Separate Client-side logic, but not easily distributed
 - Visual appealing and functional
 - High TCO
- Web-based applications
 - Implementation of separate presentation tier
 - Highly distributed – lowest TCO
 - UI is contrived and not task-oriented
 - No local data integration
 - Poor interactivity
- ... is that as far as we can go?



Copyright © 2004, ZapThink, LLC



Thin & Thick

- “Thick” Clients
 - Application and presentation logic resides locally
 - Data access can either be resident on the client or on a remote server
 - Richness of visual interface
 - Ability to interact with local data
 - High total cost of ownership – clients must be distributed, deployed, managed, and versioned
- “Thin” Clients
 - Only requires presentation logic to exist at the client
 - Business logic and data access are remote
 - Presentation logic can be a general-purpose browser – aka “Thin Client”
 - No need to manage individual clients, therefore lowest TCO
 - Poor visual interactivity
 - Little interaction with local data

Copyright © 2004, ZapThink, LLC



zapthink

Rich Clients: Advantage of Both Worlds

- “Rich Clients”
 - Can we combine the TCO and agility benefits of Thin Clients with the richness of user interaction and interactivity with local data of Thick Clients?
- Key Attributes of Rich Clients
 - *A “Thicker” Client-side interface that interacts with remote business logic elements*
 - *Transcend stateless HTTP / HTML interaction*
 - *Make use of technologies like Web Services that allow remote invocation of business logic elements as if they were local*
 - Leverage advanced technology for rich visual interaction
 - Enable online and offline modes of interaction
 - Support a wide range of devices and interaction channels

Copyright © 2004, ZapThink, LLC



zapthink

Business Drivers for RIA

- Movement away from Client/Server technology
 - Enable the Sometimes-Connected Client
 - No “offline” mode of interaction for web-based interfaces
- Increase User Productivity
 - High Transaction Volumes
 - Web interfaces clearly not optimal
 - Client-Server limited by distributability
 - Rapid User Interaction
 - The browser limits the style of interaction
 - Many screens: many problems
- Enhance Usability of Information
 - Creativity seriously hindered by the browser interface

Copyright © 2004, ZapThink, LLC



zapthink

Rich Client Approaches

- Proprietary Plug-in
 - Can support wide range of user interaction requirements
 - Not limited by browser sandbox and technology issues
 - Easy to guarantee consistent, predictable user interaction
 - End users must either have plug-in already installed or the ability to install client
 - Must maintain end-user plug-in versioning
 - Development is specific to plug-in language
 - Not easy to support in all devices
- Java / VM Based
 - Low TCO
 - Wide range of user interaction capabilities
 - Supports existing development skills
 - Runtime present on most machines
 - Might be limited by browser sandbox and security issues.
- HTML / DHTML / Javascript based
 - Low TCO
 - Limited by capabilities of widely accepted browser standards
 - Requires thin technology layer at both server and client-side
 - Can leverage existing development knowledge
 - In theory, can support widest range of devices and systems
 - Requires adherence to Browser technologies, policies

Copyright © 2004, ZapThink, LLC



zapthink

Technology Requirements for RIA Tools

- Rich User Interface
 - Capable of GUI, window-based interaction
- Two-way, synchronous and asynchronous messaging
 - Request/Response, state-less modes aren't enough
- Integrate local and remote sources of data and logic
 - Give user control over data
- Disconnected and connected modes
 - Provide for long-running transactions
- Loosely coupled presentation and business logic
 - Decouple the UI from the Service
- Client access without install
 - Realize low TCO
- Multiple web browsers and OS support

Copyright © 2004, ZapThink, LLC



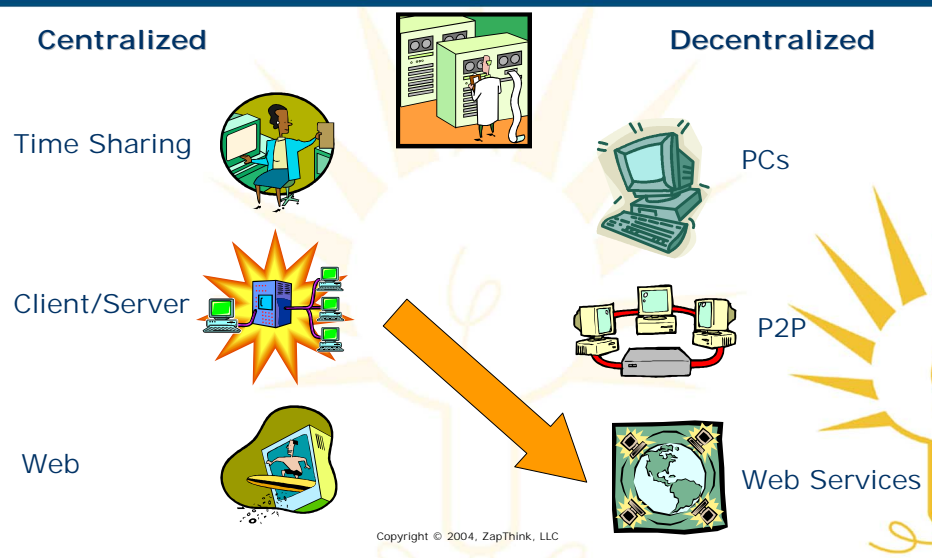
The Portal is Obsolete?

- Today, Portals are simply Web-based user interfaces to composite applications
- The combination of Web Services-based Service-Oriented Architectures and Rich Clients allow:
 - Dynamic Service composition
 - Rich user interface
 - End-user customization
 - Offline modes of interaction
 - Event-driven interaction
- So, with rich clients and Web Services, why are web-based portals needed?

Copyright © 2004, ZapThink, LLC

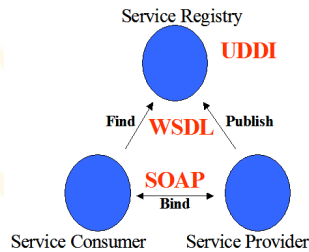


Business Motivation: Moving the Client/Server App





The Rich Client: Ultimate Web Services Consumer?

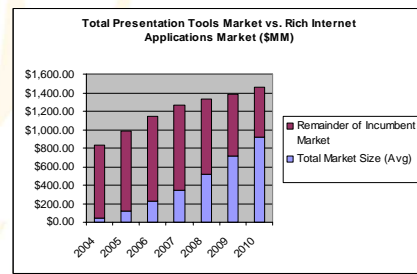
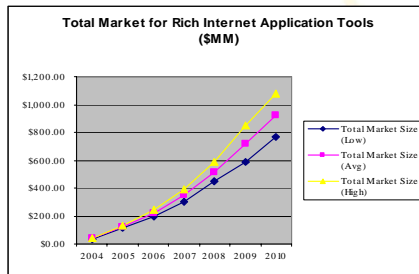


- Client-Server: The bottom of the SOA triangle
- Services are distributed, so why should they be consumed by web apps?
- Hello composition, bye-bye portals

Copyright © 2004, ZapThink, LLC




Conclusion



- The usability of an application's interface determines the usability of the application.
- The advent of the Web sacrificed much of the robust client functionality of the thick clients in client/server architectures for the benefits of thin clients.
- Rich Clients provide an optimal approach to rich user experience without sacrificing TCO.

Copyright © 2004, ZapThink, LLC



Thanks!



ZapThink is an industry analysis firm focused exclusively on XML, Web Services, and Service-Oriented Architectures.

Take Credit for attending this presentation!

- Go to www.zapthink.com/credit and enter the code.
- Download a digital copy of the presentation
- Sign up for our ZapFlash newsletter
- Get a ZapCredit good toward free research and ZapGear!



Ronald Schmelzer
rschmelzer@zapthink.com

Copyright © 2004, ZapThink, LLC

