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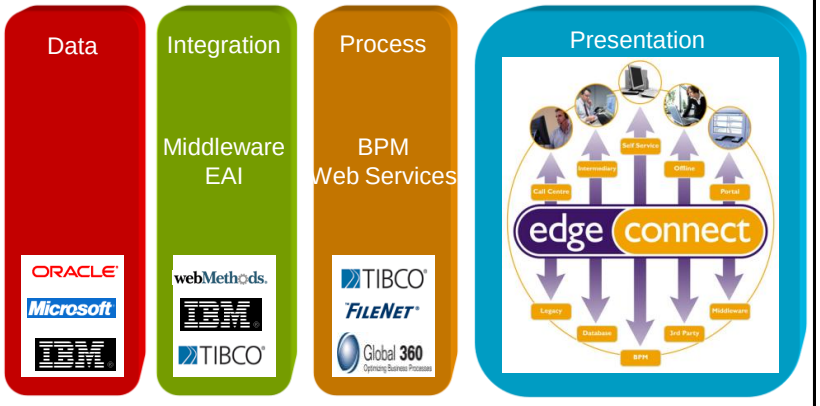
The Front Tier of SOA

Requirements for the Presentation Layer

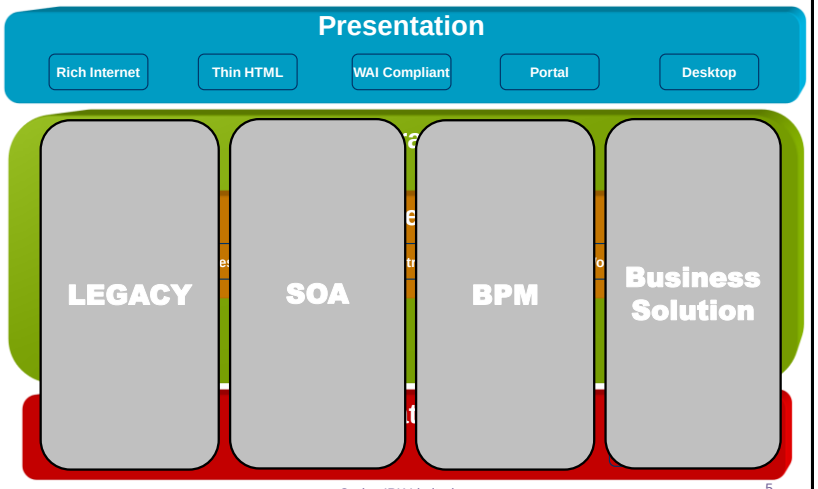
2008

"You can't just punch in 'let there be light' without writing the code underlying the user interface functions."

The next logical step…



A single layer across the enterprise !



Front end to SOA and BPM

KEY FINDINGS

- RIA will be the default mode in application development as the Internet further progresses its transition from technology to part of the fabric of everyday society.
- RWA and Web 2.0 ideas are being transferred to Enterprise Web 2.0, opening up new business opportunities, such as rapid business process development and reuse.
- Security deficiencies mean that mixing Web services (or mashing) in Enterprise Web 2.0-type applications cannot yet extend safely beyond the firewall.
- Currently, businesses need separate security policies for Internet and Intranet Web services. Intranet Web services must never be risked beyond the firewall and therefore need to be governed.
- The progress of SOA and Business Process Management (BPM) into the enterprise will require presentation-layer applications, for which RWA are ideal.
- RIA will feed into other areas of IT, so that Web-enabled IT products will have richer user interfaces; for example, in Business Intelligence.
- Software-as-a-Service (SaaS) will be given a significant technology enhancement by RWA, making it more attractive to customers.
- RWAs are now on the boundary between early adopter and early mainstream stages.

Requirements for presentation "infrastructure"

No 1: Cater for different experiences

- **Rich Internet – Ajax enabled**
- **Thin HTML**
- **WAI Compliant**
- **Portal – JSR 168**
- **Desktop – offline**

- Typically these different experiences would require different skills and create "presentation silo's"

No 2: Manage Security

www.owasp.org

- OWASP Top Ten:
  - Cross Site Scripting
  - Injection Flaws
  - Malicious file execution
  - Insecure direct object reference
  - Cross site request forgery (CSRF)
  - Information leakage and improper error handling
  - Broken Authentication and Session Handling
  - Insecure cryptographic storage
  - Insecure Communications
  - Failure to restrict URL Access

- Growing issues
- Application level implementations lead to:
  - Duplication of effort, cost and time
  - Inconsistency
  - On-going management burden

No 3: Manage Performance

- Application level approach needs to be agnostic / open to physical architecture
- Smart - Cache
  - Data
  - Content
- Smart compilation
- Compression – gZip
- Multi-threading
- Multi-processor

No 4: Manage Cross Browser

- Internet Explorer losing ground
- 60-65% Internet Exploror, 30-35% Firefox, 3% Safari
- Safari is where Firefox was 4 years ago
- Consider browsers on new devices

No 5: Memory Efficiency

- Smart allocation of session memory
  - Allocate as required
  - Clear at “process end points”
  - Create “global session stores” where possible

Requirements for developing presentation layer solutions

No 1: Avoid Presentation Silo's

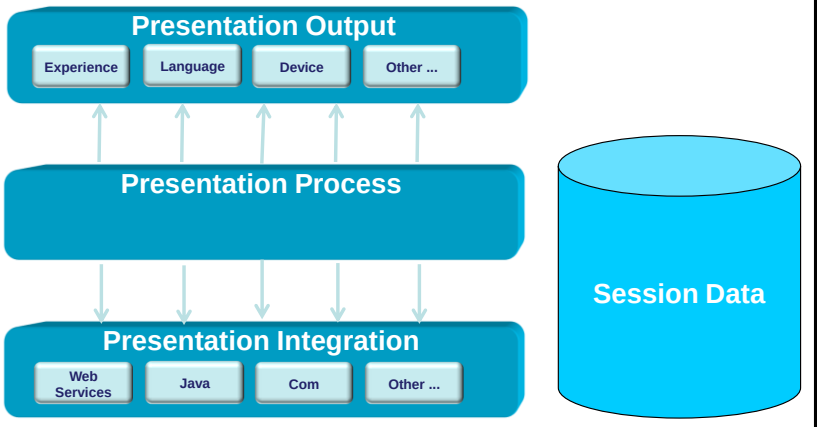
- Consider same application but different:
  - Channel (Call centre, internet, back office, ...)
  - User (Staff, customer, broker, ...)
  - Language – international & channel/user specific text
  - Devices (Big screen, medium screen, small screen)
  - Brand
  - .....basically any variation

No 2: Create layers

- Model View Controller + Style Sheets – not enough !
- Clear separation of Presentation, Process, Integration
  - Many presentations of a process
  - Change integration points without changing process
- Think about “enforcement”

- Pagination is a constraint of CSS/HTML and MVC
  - Will become a key issue in future for multi-device support

Layered Presentation Logic



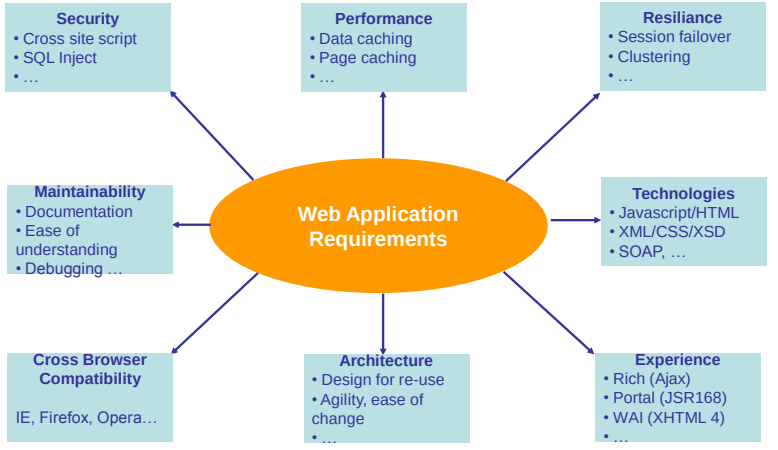
No 3: Create Re-use

- "Fragment", Snippets, etc... Create libraries, then use them
- Dynamic re-use
  - WSRP
  - Dynamic re-use in web apps
- Manage versioning

No 4: Skills, Productivity and Maintenance

- Front end development requires knowledge of many languages – HTML, CSS, Javascript, J/ASP, Java, C# etc...
- Consider tools that auto-generate applications
- Consider tools that avoid scripting and enable evolutionary prototyping
- Documentation – use tools to auto-generate
- Debugging – use tools that work in the browser as well as server side

Summary: HTML is simple, web applications aren't !



Summary

In selecting RIA tools remember:

- **Business requirements may drive "silo based" presentations**
- **It is possible to have rapid prototyping and an agile solution**
- **RIA is not only online web applications using Ajax, but also portal, offline**
- **RIA is not just client software, think about the "presentation infrastructure"**
- **Presentation infrastructure is not just about "rendering"**

We can help you avoid simply doing this with RIA

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Thank you!

Hope you found this informative!

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