



## **RIA Meets Enterprise SOA**

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## **Domains**

- Federal
- Healthcare
- Transportation
- Financial Services
- Telecommunication

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## Rich Internet Applications

**Rich Internet applications (RIA) are web applications that have the features and functionality of traditional desktop applications. RIAs typically transfer the processing necessary for the user interface to the web client but keep the bulk of the data (i.e. maintaining the state of the program, the data etc) back on the application server.**

[http://en.wikipedia.org/wiki/Rich\\_Internet\\_application#History\\_of\\_RIAs](http://en.wikipedia.org/wiki/Rich_Internet_application#History_of_RIAs)

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# What are Rich Internet Applications

- Expressiveness**
- Rich media integration**
- Performance / Responsiveness**
- Real time**
- Offline**
- Deep back-end integration**
- Web deployment model**

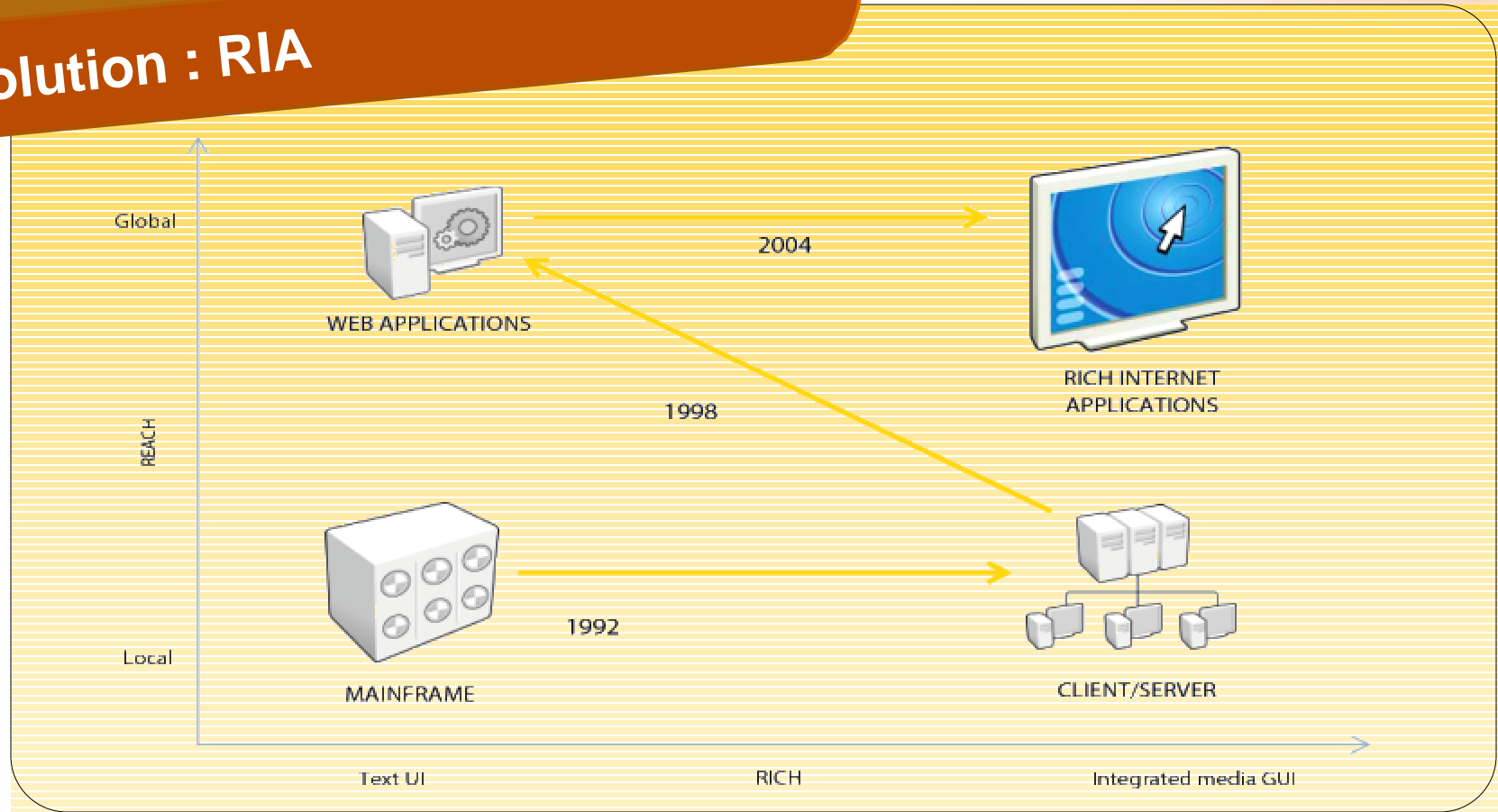
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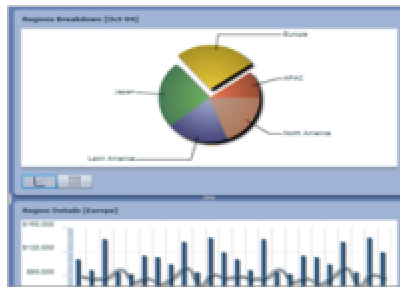
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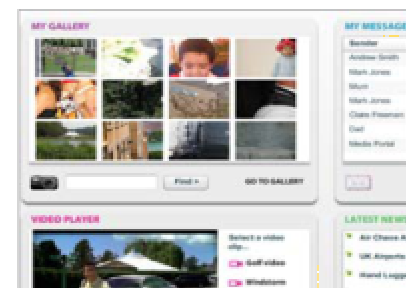
# Evolution : RIA



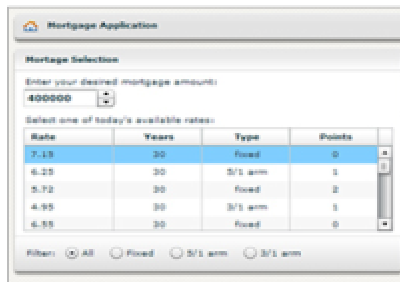
# Few RIA Examples



- Data visualization



- Collaborative media experiences

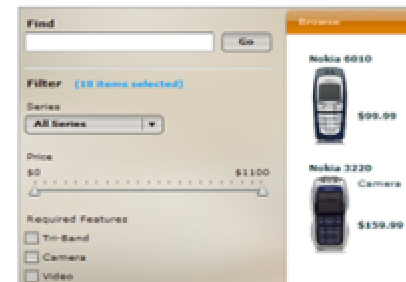


A screenshot of a "Mortgage Application" web interface. It includes a "Mortgage Selection" section with a text input for "Enter your desired mortgage amount:" containing "400000". Below this, it says "Select one of today's available rates:" and displays a table:

Rate	Years	Type	Points
7.19	30	Fixed	0
6.25	30	5/1 arm	1
5.72	30	fixed	2
4.95	30	3/1 arm	1
6.55	30	fixed	0

At the bottom, there are radio buttons for "Filter" with options:  All,  Fixed,  5/1 arm,  3/1 arm.

- Business applications

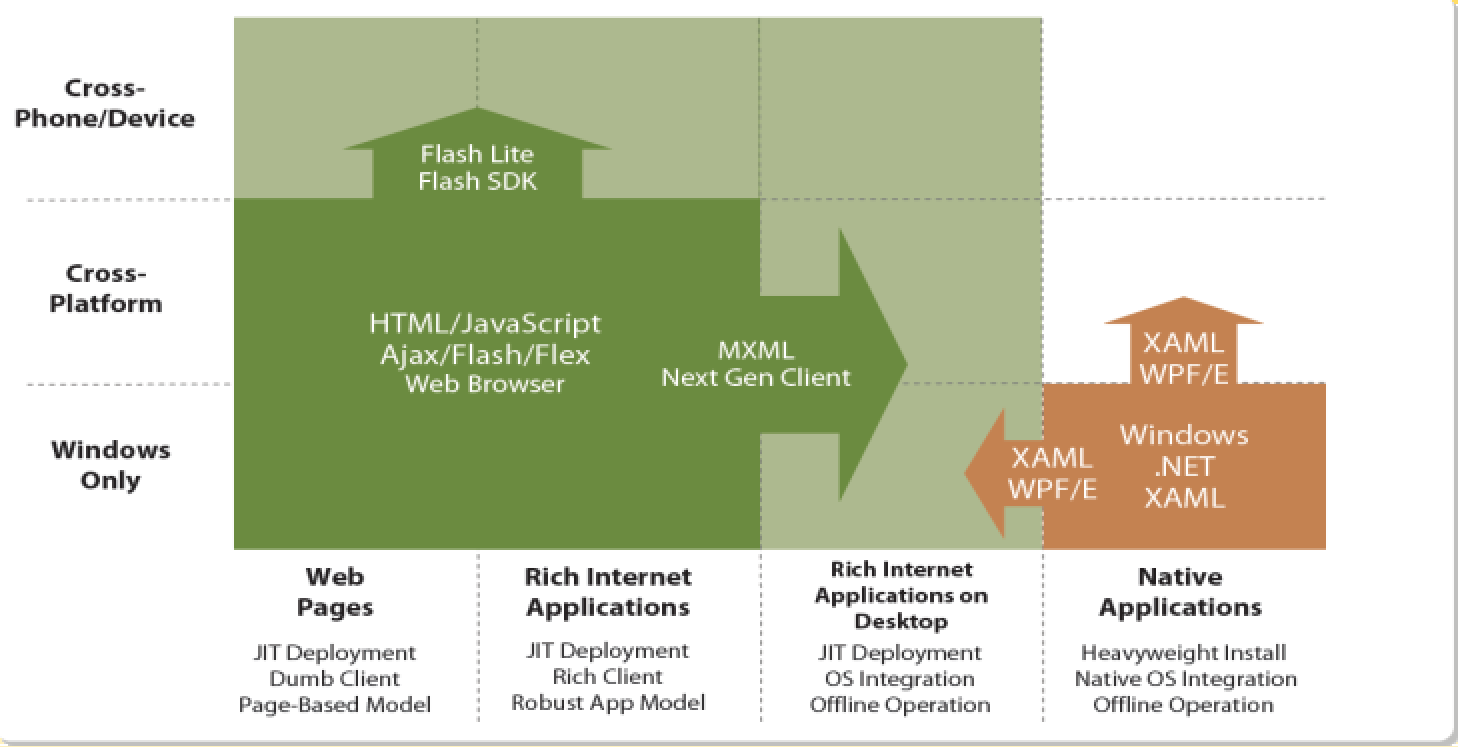


A screenshot of a guided self-service interface for phone selection. It features a "Find" section with a search bar and a "Go" button. Below is a "Filter" section with "(18 items selected)" and a "Series" dropdown menu set to "All Series". A "Price" slider ranges from "\$0" to "\$1100". Under "Required Features", there are checkboxes for "Tri-Band", "Camera", and "Video". On the right, two phone models are displayed: "Nokia 6080" for "\$99.99" and "Nokia 3230" for "\$159.99".

- Guided self-service



# RIA Technology Trends



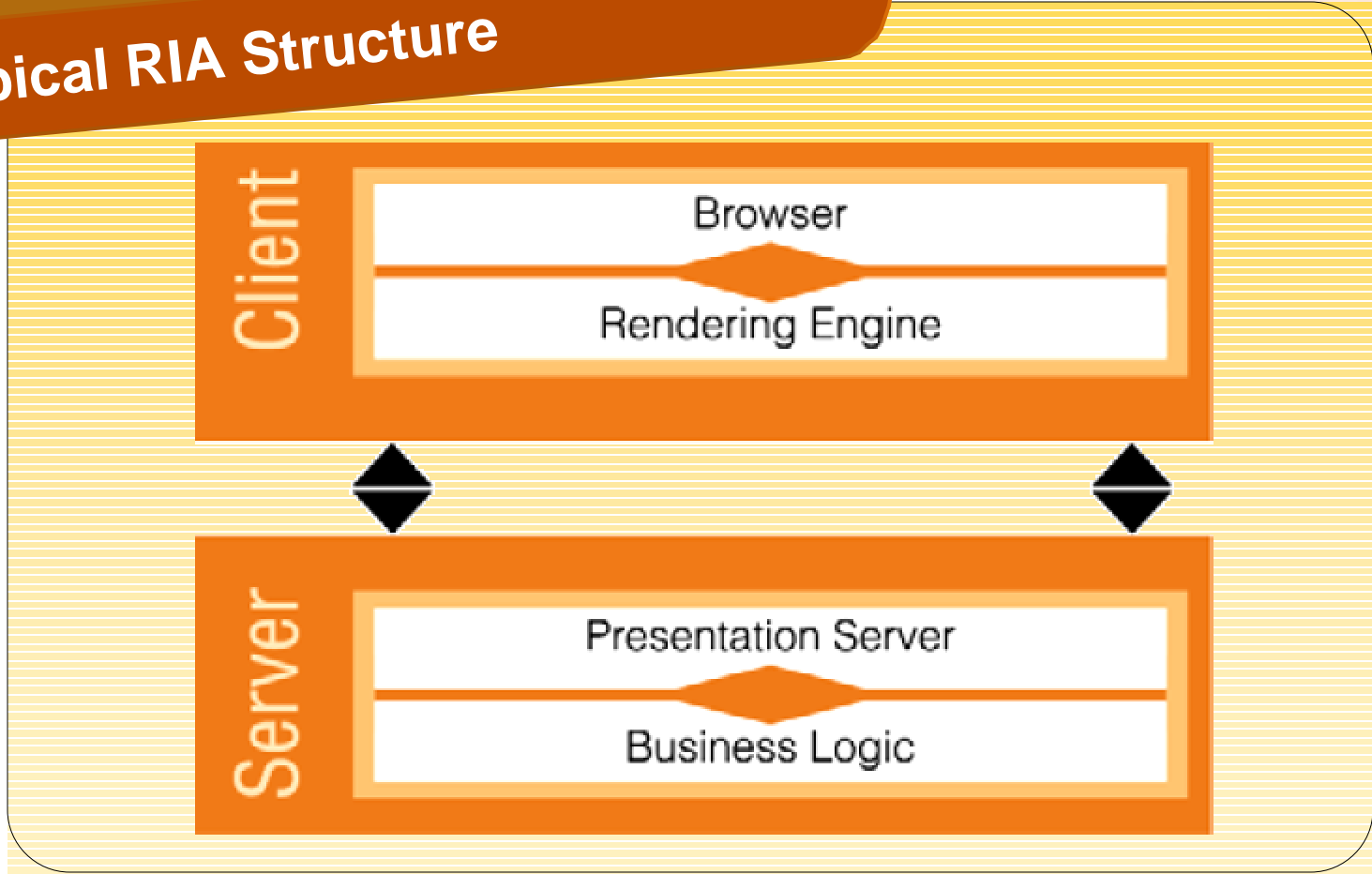
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## Typical RIA Structure







## **New Possibilities**

**RIA as the face of SOA**  
**RIA as SaaS (Software as Service) enabler**  
**Defining UI Capabilities of MASHUPS**

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# RIA as the face of SOA

The screenshot displays a web application interface for Akira Technologies. At the top, there is a navigation bar with a search bar and an 'Add' button. Below this, there are 'Location Boxes' for DC, DCA, IAD, BWI, and Baltimore. The main section is a 'Job Board' with tabs for 'Today', 'Tomorrow', 'Special Events & Svc+', and 'Build Job Board'. It contains a table with columns: Hrf., Status, Type, Veh, Chfr, Grtr, PU Time, PU Updt, Pax, PU Loc, DO Loc, Account, and Notes. Two jobs are listed:

Hrf.	Status	Type	Veh	Chfr	Grtr	PU Time	PU Updt	Pax	PU Loc	DO Loc	Account	Notes
+	AS	Execut	964	077		15:00		Four Seasons	Reagan National	Four Seasons Hotel	Four Seasons Dc	
+	CO	Execut	808	808		18:00		Four Seasons	Reagan National	Four Seasons Hotel	Four Seasons Dc	

Below the table, it states 'There are 2 Jobs on this Board'. At the bottom, there is an 'Inventories' section with tabs for 'House Drivers', 'House Vehicles', 'IO and HPC Drivers', 'IO Vehicles', 'FO Slots', and 'Greeters'. A date selector is set to '23Mar2007'. A row of buttons shows various IDs: 077, 089, 119, 20, 396, 114, 663, 670, 687, 808.

On the right side, there is a 'Service Provider : Washington DC Carey' section with the Akira logo and 'AKIRA TECHNOLOGIES'. Below that is a 'Job Details' section with tabs for 'Job' and 'Billing'. It includes fields for 'Passenger:', 'Arranger:', 'Account:', 'Account Number:', '# of PAX:', 'Flight from:', 'PU Location:', 'Vehicle Type:', 'Trip Type:', and 'DO Location:'. There is also a 'Preferences, Itinerary, and Notes' section with fields for 'PU:', 'DO:', 'Itinerary:', and 'Notes:'. A 'Reservations' button is at the bottom right.

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# RIA as SaaS Enabler

**Search**  
Search All  
Go!  
 Limit to items I own  
Advanced Search...  
Create New...

**Recent Items**  
00001002

**Custom Links**

- Add/Remove Users
- Import Contacts
- Outlook Edition
- Email Templates
- My Email Settings
- Mass Email
- Edit Custom Links

**Messages and Alerts**  
Edit Message and Alerts

**Recycle Bin**

**Srinivas Chennamaraja at Akira Technologies, Inc**  
Friday, March 23, 2007

**Dashboard** Refresh Customize Page  
As of 3/23/2007 11:24 AM

**Users Logged In** Last 7 Days  
Gauge: Sum of Active = 1

**# Completed Activities** Last 30 Days  
Assigned | Record Count

**Information Added to Salesforce** # of Accounts  
Record Count vs. Created Date (March 2007)  
Record Count: 3

**My Tasks** New Overdue  
You have no open tasks scheduled for this period.

**Calendar** New Event  
Today 3/23/2007  
You have no events scheduled for the next 7 days.

March 2007  
Sun Mon Tue Wed Thu Fri Sat  
25 26 27 28 01 02 03  
04 05 06 07 08 09 10  
11 12 13 14 15 16 17  
18 19 20 21 22 23 24  
25 26 27 28 29 30 31

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## So what's a SOA and where does RIA fit?

**SOAs are like snowflakes .....  
No two are alike.**

**SOA is strategic framework of technology that let all interested systems, inside and outside an organization, expose and access well-defined services, and information bound to those services, that may be further abstracted to orchestration layers, composite applications, and interfaces to solution development.**

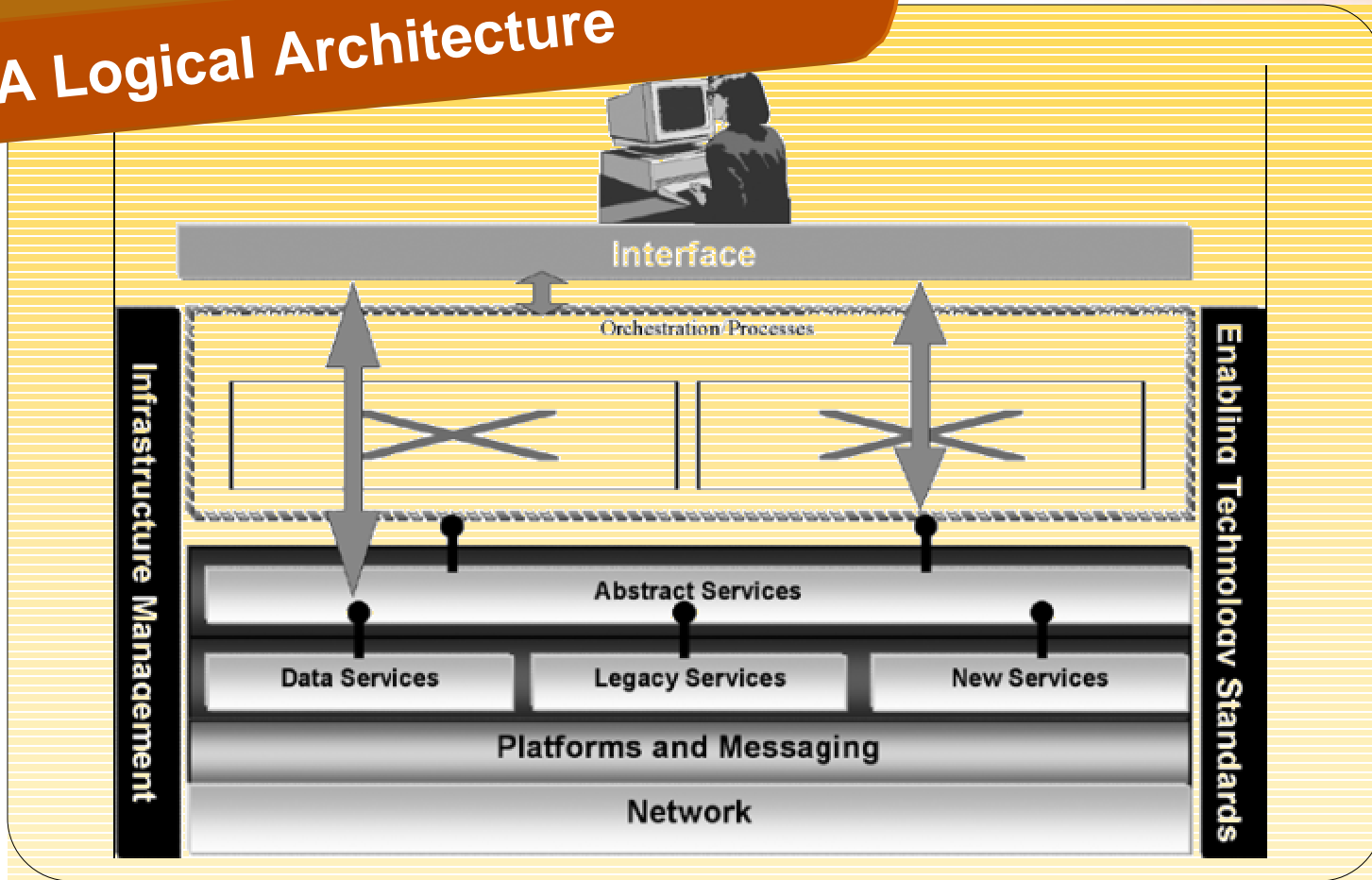
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# SOA Logical Architecture



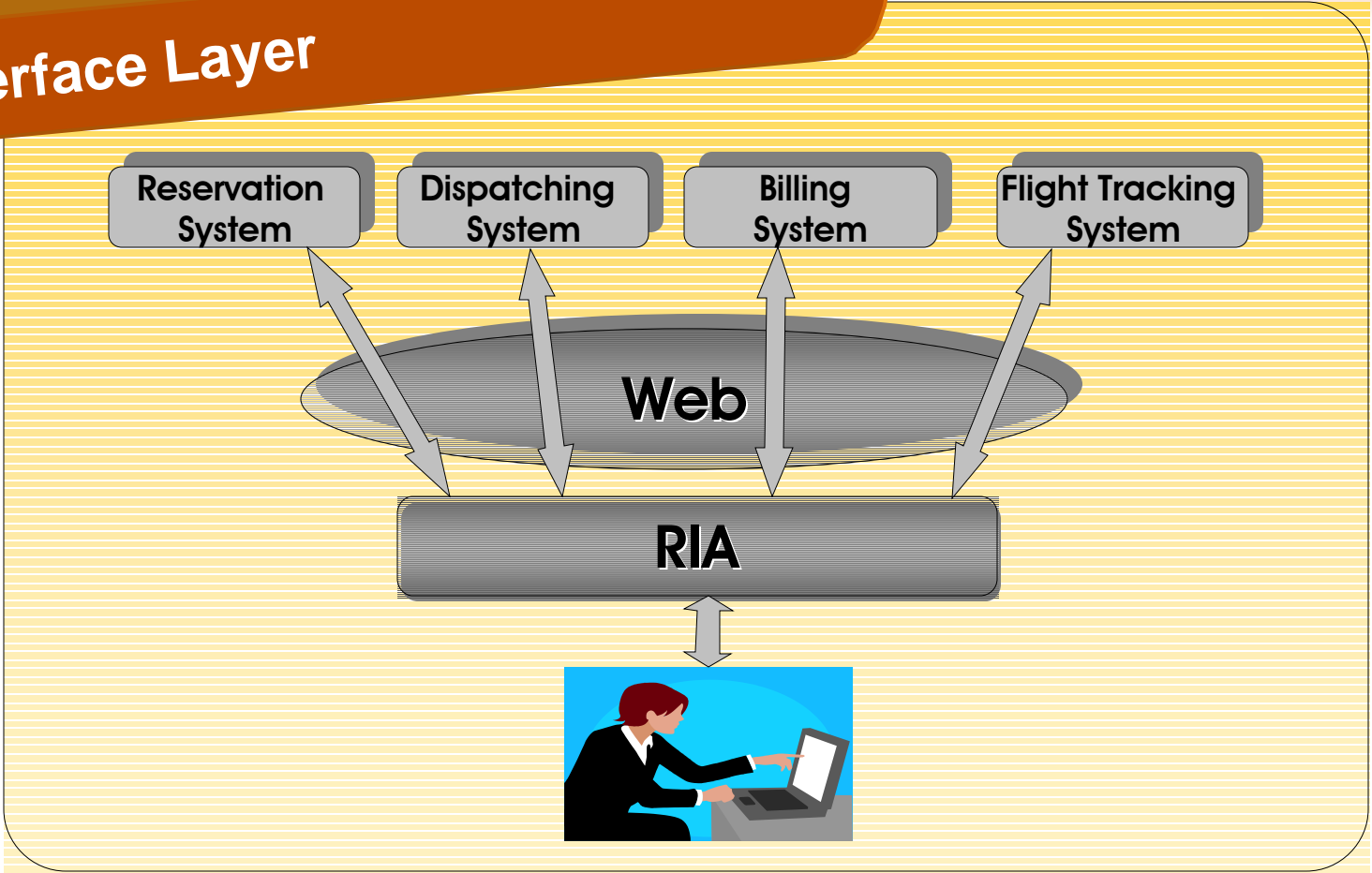
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# Interface Layer



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## RIA Platforms: The Major Choices

**Java Applets**  
**Adobe Flex**  
**OpenLaszlo**  
**Microsoft Windows Presentation  
Foundation (WPF)**  
**Ajax**

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## Adobe Flex 2

Flex 2 apps run cross-platform in a ubiquitous Flash Player 9 that's a lightweight virtual machine. The platform includes:

**MXML**

**ActionScript 3.0**

**Flex Data Services**

**Charting and Multi Media**

**Components**

**Eclipse-based IDE**

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## Ajax

**Stands for Asynchronous  
JavaScript and XML**

**The term was Coined By Jesse  
James Garret in 2005**

**Amalgamation of several existing  
technologies.**

**(XHTML, CSS, DOM, XML, XSLT,  
XMLHttpRequest, and JavaScript)**

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## Ajax Toolkits: Commercial

[Backbase](#)

[JackBe](#)

[Tibco General Interface](#)

[Nexaweb](#)

[ICESoft](#)

[Bindows](#)

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# Ajax Toolkits: Commercial

**Four Aces of AJAX** These four SDKs are closely matched in capabilities. The main differences lie in server-side support and fine points such as visual editing and debugging.

	Browser support	Server platforms	Visual editing tool	Debugging support
<b>Backbase 3.2</b>	Internet Explorer 5+ on Windows, Firefox 0.8+ on any platform, Mozilla 1.5+ on any platform, Netscape 7.2+ on any platform, Camino 0.8+ on Mac OS X; support for Opera and Safari forthcoming	Client application works with any standard Web server; additional integration with Java-based frameworks, including JSF and Struts available	Basic interactive Web page compiles and displays Backbase XML	Integrated
<b>Bindows 2.5</b>	Internet Explorer 5.5+ (on Windows), Mozilla 1.4+, Netscape 7.1+, Firefox, K-Meleon, Camino, Opera (partial support); Safari support forthcoming	Static XML, HTML, and JavaScript can be delivered from any standard Web server	Basic interactive Web page compiles and displays Bindows XML	None; Firebug recommended
<b>JackBe NQ Sulte 4.6.1</b>	Internet Explorer 5.5 and later, Firefox, Netscape, Safari	Basic client works with any standard Web server; forthcoming Presto will link together Web services in the server farm and translate them into JackBe's JSON protocol	Yes, Eclipse-like IDE	None; Firebug recommended
<b>Tibco General Interface 3.2</b>	Internet Explorer 6 and Firefox 1.5; IE 7 support forthcoming	Web services and Tibco's Web service bus	Yes, Eclipse-like IDE	New step-through debugger for Internet Explorer; Venkman recommended for Firefox

**Source: InfoWorld**



## Ajax Toolkits: Open Source

[Dojo Toolkit](#)

[Google Web Toolkit \(GWT\)](#)

[Microsoft Atlas](#)

[Open Rico](#)

[Yahoo Ajax Library](#)

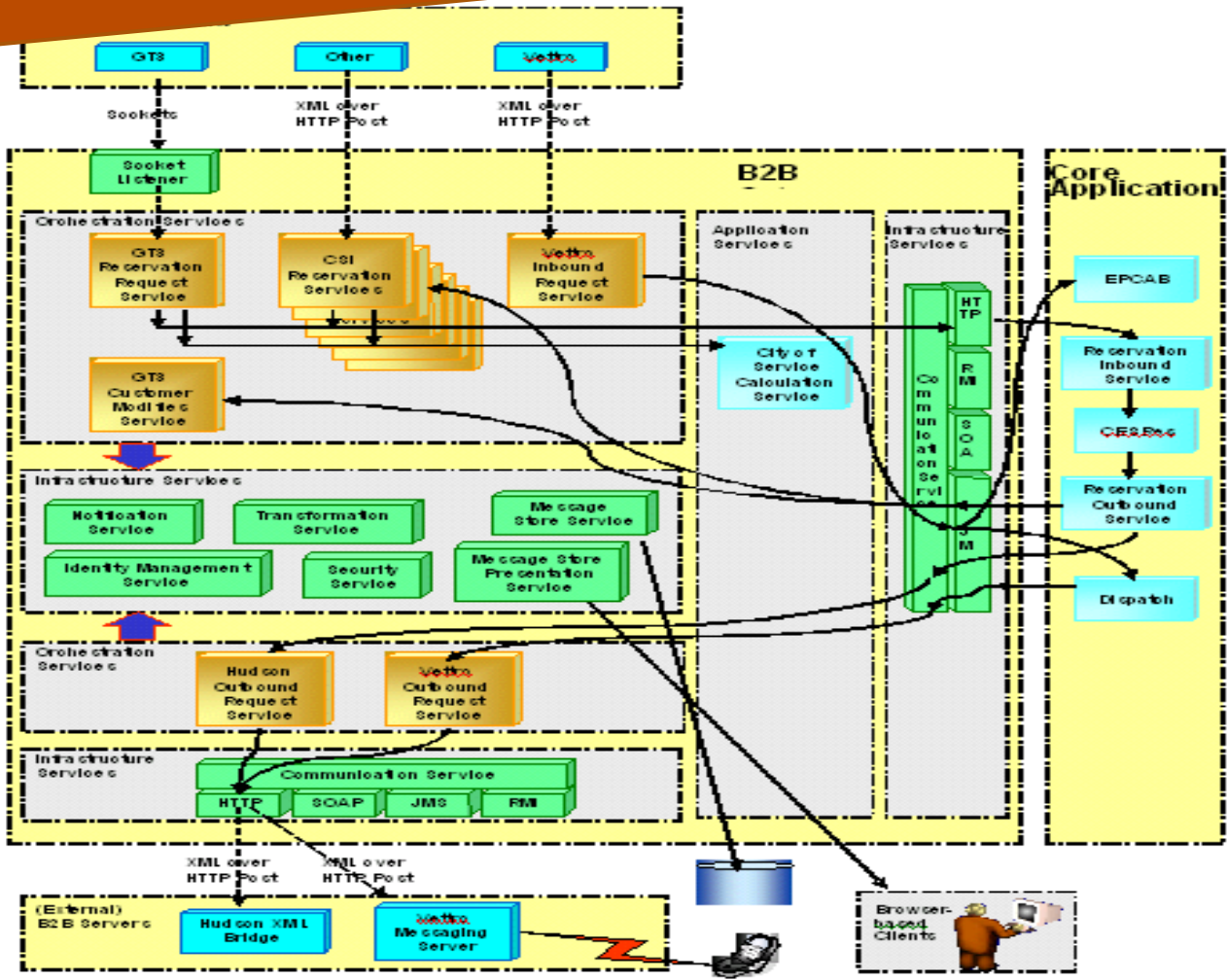
[Zimbra Kabuki](#)

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# Case Study: Transportation Company



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## Challenges For Enterprises

**Lack of Standards**  
**Market Volatility**  
**Security Concerns**  
**Accessibility**

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