



Building RIAs with Flex & OL

My Experiences

Nirav Mehta

RIA?

Rich Internet Application

 [Sign in / create account](#)



WIKIPEDIA
Free Encyclopedia

[Page](#)
[Unity Portal](#)
[Recent events](#)
[What's new](#)
[Help](#)
[Privacy](#)
[Terms of use](#)
[Mobile](#)
[Desktop](#)
[Article](#)

[article](#) [discussion](#) [edit this page](#) [history](#)

Rich Internet Application

From Wikipedia, the free encyclopedia.

Rich Internet Applications (RIA) are a cross between [web applications](#) and traditional desktop applications, transferring some of the processing to the client end.

RIA's typically:

- run in a web browser, or do not require software installation.
- run locally in a secure environment called a *sandbox*
- can be "occasionally connected" wandering in and out of hot-spots or from office to office

The term "Rich Internet Application" was introduced in a Macromedia whitepaper in March 2002, though the concept had been around for a number of years before that under different names such as X Internet and Rich Clients.

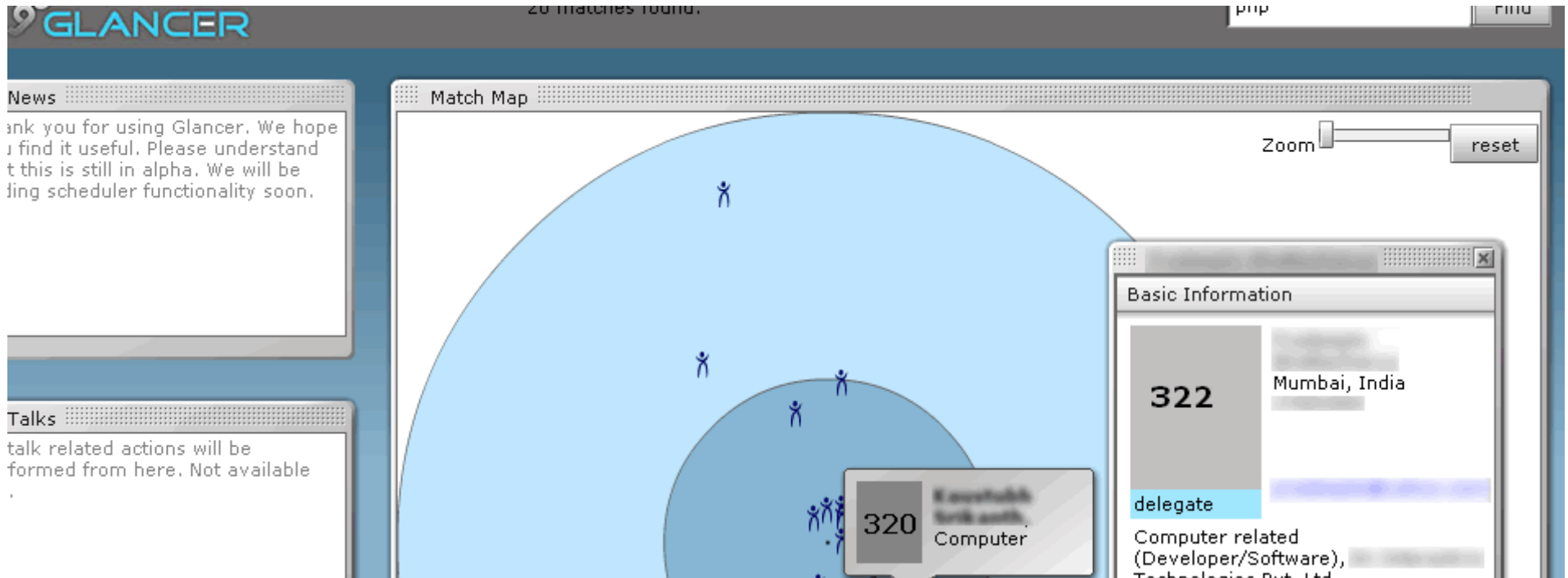
- What's RIA?
- Why RIA?
- Why Flash?
- Why not AJAX?

What's OpenLaszlo? Flex?



- XML based languages / platforms for RIA development
- Flex – from Adobe / Macromedia
- OpenLaszlo – from Laszlo Inc – open source / GPL

Glancer



- Friend Finder & Scheduler app
- Used in foss.in/2005

Tech Choices

?



?

?

Mono	Php
<ul style="list-style-type: none">- Existing code- Easy w/s generation- Nibedita can do- custom code- Easy debugging- May raise some deployment issues- Dataset for records	<ul style="list-style-type: none">- From scratch- Need to try- I have to do / Vijay- Qcodo - can use for CRUD- Need to learn- Need to learn Qcodo- Foss. Fr friendly- Libraries for file upload / reporting etc- No Dataset type

?



?



?

- Cutting edge technology
- Flash vs Flex vs OpenLaszlo
- PHP vs Mono vs ColdFusion

OpenLaszlo & Flex

```
<canvas>  
<mx:application>
```

- XML Based, SWF output
- Eclipse connection
- Attributes, Events, Fundamentals
- Speed!

Workflow

- LaszloIDE / FlexBuilder
- LZX / MXML
- SWF
- Solo / Server / FDS

Glancer - WSDL Blues

```
84
85  /**
86   * Authenticate a user
87   *
88   * @param string $email
89   * @param string $password
90   * @return UserInfo Details of this user
91   */
92  public function login($email, $password) {
93
94      $userInfo = new UserInfo();
95
96      if ("" == $password) {
97          return $userInfo->result = ResultCode::Invalid
98      }
99      try {
100         $arrRes = $this->objUsers->Login($email, $pas
101         if (is_array($arrRes)) {
102
103             $userInfo->setData($arrRes);
104             $userInfo->session_id = uniqid();
105             // Insert this session info into the tabl
106             $strQuery = "REPLACE INTO gcr_user_sessions (session_id, user_id, password, demote_addr)
107                 VALUES ('" . $userInfo->session_id . "' , '" . $userInfo->user_id . "' , '" . $password . " , 'DEMOTE_ADDR')";
```

```
</xsd:complexType>
<xsd:complexType name="UserInfo">
  <xsd:all>
    <xsd:element name="fullname" type="xsd:string" />
    <xsd:element name="result" type="xsd:string" />
    <xsd:element name="session_id" type="xsd:string" />
    <xsd:element name="user_id" type="xsd:integer" />
  </xsd:all>
</xsd:complexType>
<xsd:complexType name="stringArray">
  <xsd:complexContent>
    <xsd:restriction base="soapenc:Array">
      <xsd:attribute ref="soapenc:arrayType" wsdl:arr
    </xsd:restriction>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="PersonSummary">
  <xsd:all>
    <xsd:element name="fullname" type="xsd:string" />
    <xsd:element name="occupation" type="xsd:string" />
    <xsd:element name="Subotp" type="xsd:string" />
```

- Mono / PHP Webservices
- WSDL Generation
- Security

Glancer - Map Plotting Logic

plotting :-
 $360 / 20 = 18$

axes $162, 100$
 r

0-20 slot 1

radius
 $\text{pdist} = \text{radius} / 100$
 $= \text{px}$

degree, distance

85, 100
 9×20
 200
 $18 \rightarrow 35$
 50

3 100/100
 $> 1 \text{ pixel}$
 $\text{score} \times \text{pdist}$

formula:-

$x = r \cos \theta$
 $y = r \sin \theta$

$\theta = \text{angle / deg}$
 $r = \text{distance}$

Test cases:-

θ	r	x, y
0 A	75	18, 75
0 J	25	162, 25
0 O	10	252, 10
0 M	79	216, 79
0 R	100	270, 100

Formula Res: x, y

Transform Rules

1) $\theta < 180$
 $\theta = 180 + \dots$
 $\theta > 180$
 $\theta = \dots$

	Want old θ	Math Note	Form
Q1	25°	165°	180 -
Q2	130°	50°	180 -
Q3	200°	340°	360 +
Q4	300°	240°	540

- Trigonometry?
- $x = r \cos \theta, y = r \sin \theta$
- Shift of origin, shift of quadrants

PFA - DataGrid

Fullname	Username	Pwd	Role	Active	Logins
Brigitte Zinger	Brigitte Zinger	upatt	2	1	23
Bravo Lukas	Bravo Lukas	bravok	2	1	18
Elke Hottbeck	Elke Hottbeck	hottb	2	1	0
Markus Spindler	Markus Spindler	spind	2	1	8
Natasa Furchner	Natasa Furchner	natf	2	1	6
Frankfurt	Frankfurt	fran	2	1	244
Paul Durbin	Paul Durbin	pdurbin	2	1	11
Use Page	Use Page	usepage	2	1	38

Email addresses for

Use Page

Email	Account
upatt@xxxxxxxxxxxx	Use

Add

Delete

Legends : Security

0 No Access

- Editing in place
- Synchronizing the data with backend
- Focus issues – SelectedIndex etc

Version mismatches

`null is undefined`

- Flex 2 – beta 1 vs beta 2 vs beta 3
- OpenLaszlo – 3.1 vs 3.2 vs 3.3

Debugging

- Laszlo's Debug window
- Flex - ?

You will hit bugs!

```
<!-- Basic variables -->
<attribute name="action" value="login" type="string" />

<!-- Enable debugging window -->
<debug width="400" height="350" x="800" y="50" />

<!-- Resource used -->
<include href="resources.lzx" />

<!-- Style for the UI -->
<whitestyle name="mystyle" isdefault="true" />

<!-- Laszlo Includes -->
<include href="utils/layouts/wrappinglayout.lzx" />
  <include href="base/baseslider.lzx"/>
  <include href="lz/slider.lzx"/>

<!-- Datasets -->
<include href="datasets.lzx" />

<!-- View and other Classes -->
<include href="class.person.lzx" />
<include href="class.personInfo.lzx" />

<include href="webservice.lzx" />
<!-- All UI elements made visible by course action attribute -->
```



- I am not talking about bugs in your app!
- It may bleed if you are on the cutting edge
- Difficulties will come
- You may not be able to solve them

Glancer Response



- Cool, Amazing
- Talk of the town
- You should take this to more people

What I am not happy with



- Speed
- Uncertainty

What I am happy about



- Ease / Power
- Coolness / UI
- Coders can do RIA now!
- Ecosystem / Community is building

Thank you

- Nirav Mehta
- nirav@magnet-i.com
-
- www.magnet-i.com
- www.mehtanirav.com
- www.glancer.net

