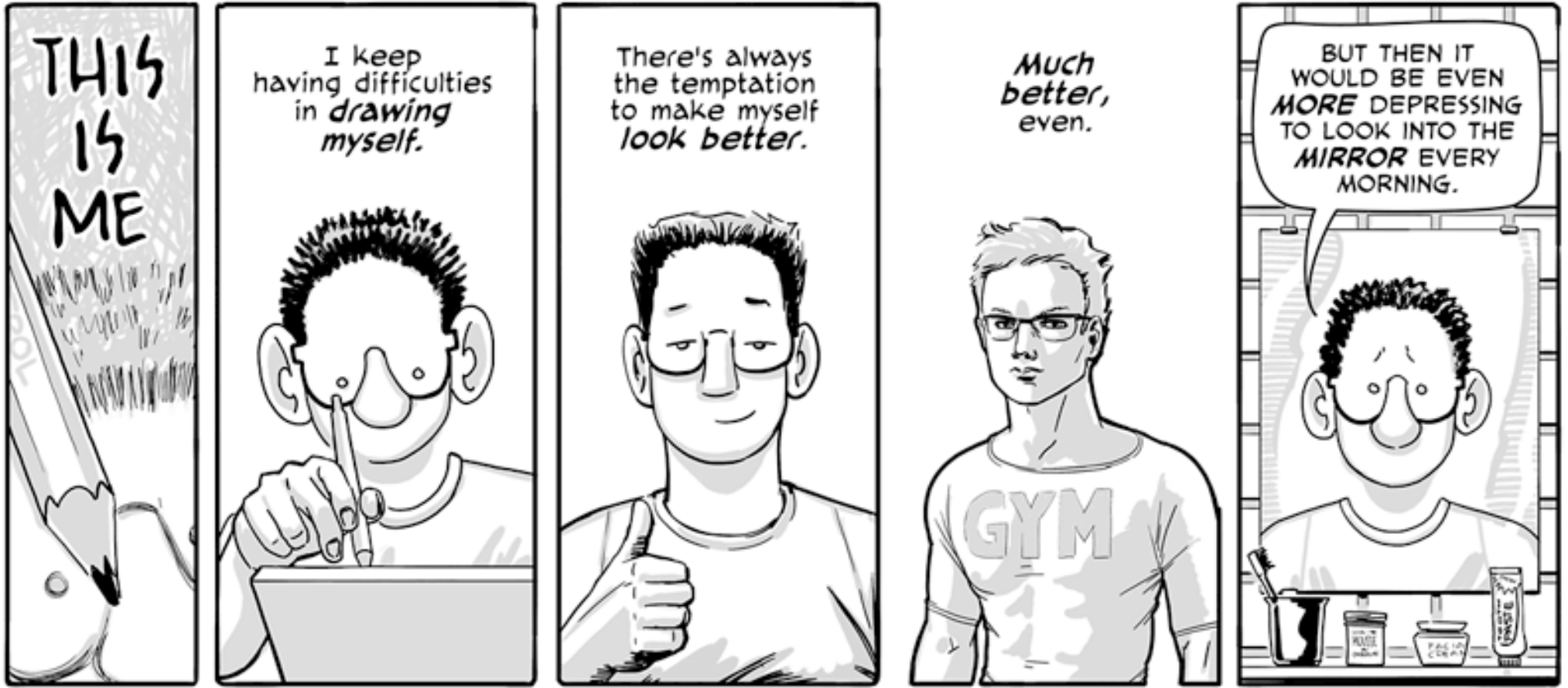


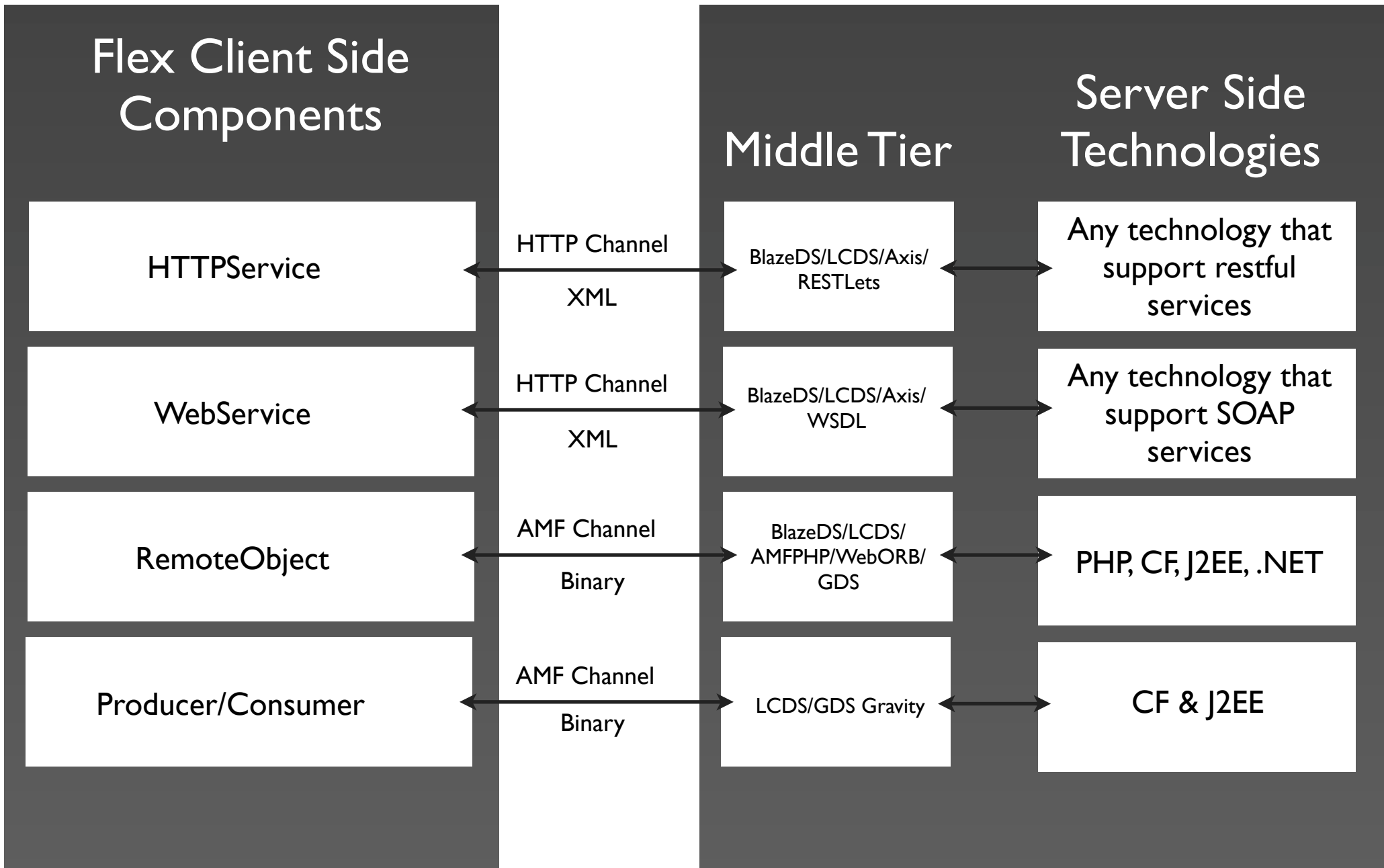
Fiber : How & What should your RIA consume ?



By Mohammed Khan, Project Director



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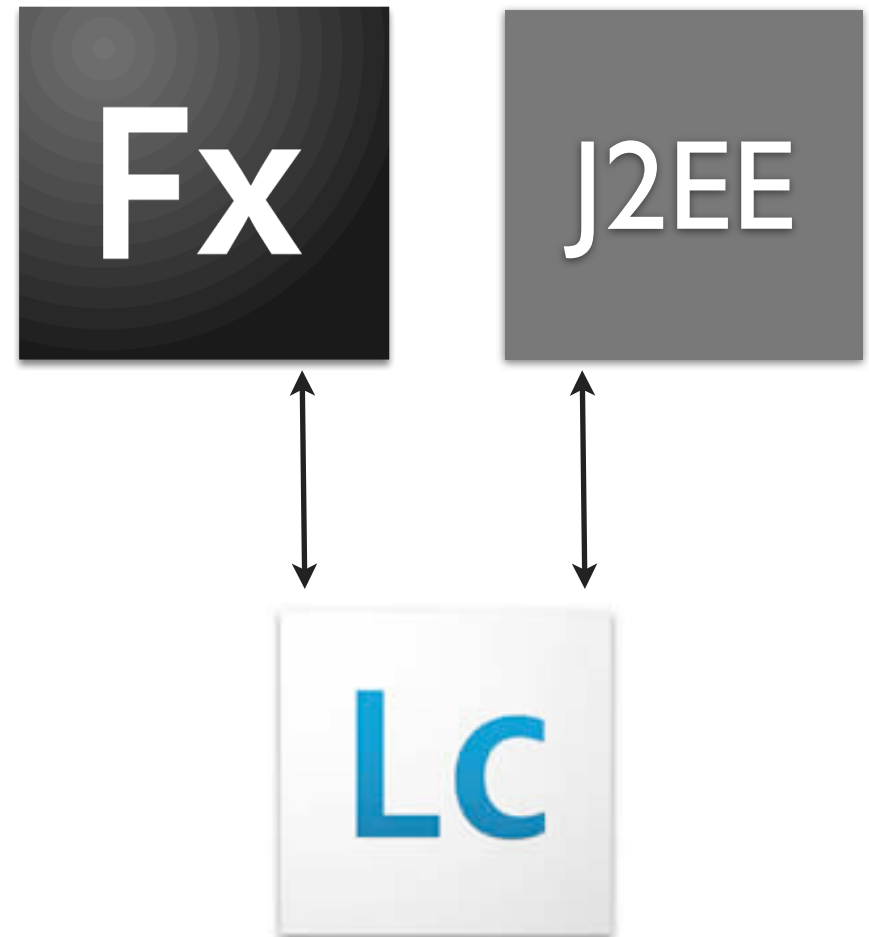
What is LCDS ?

Adobe LiveCycle Data Services simplifies the development of Rich Internet applications using Flash and Java.

LiveCycle Data Services provides tooling, client and server frameworks to help you write applications that leverage the flexibility and power of Flash with your existing as well as new enterprise Java applications.

Helps designers and developers build Real Time Collaborative applications.

PDF and other document objects can be generated, managed and integrated as part of the Rich Internet applications.



Data synchronization

LiveCycle Data Services ES removes the complexity and potential for error by providing a robust, high-performance data synchronization engine between client and server. It also easily integrates with existing persistence solutions to provide an end-to-end solution.

LiveCycle Remoting

Using the standard LiveCycle Data Services ES remote object feature, Flex developers can call LiveCycle services without having to worry about the plumbing involved—while leveraging a more efficient binary protocol.

RIA-to-PDF file generation

Users can generate template-driven PDF documents that include graphical assets from Flex applications such as graphs and charts.

Data paging

LiveCycle Data Services ES allows for the automatic paging of large data sets, paging of data accessed rather than full query result set, and on-demand paging directly to the database, as long as clients are kept up to date with the latest changes.

Data push

LiveCycle Data Services ES offers data-push capability, enabling data to be automatically pushed to the client application without polling.

Publish and subscribe messaging

LiveCycle Data Services ES provides a publish/subscribe messaging infrastructure that integrates with existing messaging systems such as JMS and enables messages to be exchanged in real time between browser clients and the LiveCycle Data Services ES server.

Collaboration

LiveCycle Data Services ES frees client applications to concurrently share data with other clients or servers. This model allows new application concepts like "co-browsing" and synchronous collaboration, which allow users to share experiences and work together in real time.

Better, Faster, Easier Application Development

- Model Driven Development Workflow
- Remote Development Services

Quality Of Service

- Reliable Communications
- Data Throttling

Reliable Communications

- Reliable web transactions over the internet
- Reliable real-time & near real-time applications
- Pause & Resume capability for applications

Data Throttling

Reduces or increases the amount of data being streamed based on the speed at which Flash Player processes data.

Fiber :

A code name for a suite of technologies that enables model driven development of Flex applications. The suite consist of :

- A modeling language called Adobe Data Model.
- Tools to create, manage and deploy Data Model.
- A runtime to execute the Data Model.

Adobe Data Model :

- Adobe Data Model: An XML-based language that lets you create data model.
- Models created using Adobe Data Model are stored as XML-files with extension as .fml
- Lets you use Java Persistence Query Language (JPQL).

Annotation

An annotation element holds an arbitrary collection of name-value pairs. Values are simple strings. Annotations are a convenient way to associate arbitrary simple data with model definition elements.

Service

A service element declares a set of strongly-typed function signatures that represent external functions available to expressions within the model.

Entity

Entities represent custom data types and are made up of *data properties* that correspond to persistent storage and *derived properties* that are not backed by persistent storage and enable behavior customization in expressions over data properties and function calls.

Style

A style element defines a style available within a model. A style is a collection of user-interface-related attributions that can be associated with a property element in the model.

Overview of the Modeler plugin for Flash Builder 4.

```
<model xmlns="http://ns.adobe.com/Fiber/0.3">
  <annotation name="DMS">
    <item name="hibernate.connection.datasource">java:/comp/env/jdbc/sampleDB</item>
    <item name="hibernate.dialect">org.hibernate.dialect.MySQL5Dialect</item>
  </annotation>
  <entity name="Departments" persistent="true">
    <annotation name="ServerProperties">
      <item name="ServerType">LCDS</item>
    </annotation>
    <annotation name="DMS">
      <item name="Table">Departments</item>
    </annotation>
    <annotation name="VisualModeler">
      <item name="width">115</item>
      <item name="height">62</item>
      <item name="x">24</item>
      <item name="y">23</item>
    </annotation>
    <id name="deptID" type="integer">
      <annotation name="DMS">
        <item name="ColumnName">DeptID</item>
        .....
```

Getting started with LCDS 3 and FB4.

Working with Annotations & Styles.

There are three types of filters:

1. Criteria based Filters
2. Pass-through Filters
3. Transform Filters

Criteria based filters lets you define object scope of an entity with expressions

```
<filter name="getByDepartmentLike" criteria="department Like"/>
```

Pass-through based filters lets you define object scope of an entity with a JPQL query

```
<filter name="getByEmployeeLN">  
  <query><![CDATA[jpql:SELECT emp FROM Employees emp WHERE emp.employeeLastName='Ram']]></query>  
</filter>
```

Transform based filters lets you define return structure of an entity

```
<filter name="getByEmployeeLN">  
  <query><![CDATA[jpql:SELECT emp FROM Employees emp WHERE emp.employeeLastName='Ram']]></query>  
  <annotation name="DMS">  
    <item name="propertySpecifier">employeeID, employeeFirstName</item>  
  </annotation>  
</filter>
```

Filters: Criteria, Pass-Through & Transformations

Where to go from here ?

Q&A

- For more details about esberi, kindly visit <http://www.esberi.com>
- You can check out my blog at <http://www.thepixelcode.com>
- Available on twitter as @mohammed_khan
- You can also mail me your queries to mohammed.khan@esberi.net