Integration of Webi Reports using SDK into your JSP App

Tom Ray, Daugherty Business Solutions
AGENDA

1. The Business Problem
2. Report Engine SDK
3. The BusinessObjects Viewer Samples
4. Demo of Samples and Basic Integration
5. Integrating into your application
6. Customized Application demo
7. Places to find information
8. Q&A
THE BUSINESS PROBLEM

BusinessObjects reporting is not just for analysis reporting...
THE BUSINESS PROBLEM

- Traditional uses of Business Objects:
  - Stand-Alone reporting
    - Desktop Intelligence
    - Crystal Reports
  - Portal (Infowiew) reporting
    - Web Intelligence
  - Dashboard and Performance Manager

- But what if…
THE BUSINESS PROBLEM

- You have a need for an application that has:
  - Parameter driven data pages
  - Easy menu driven system for non technical users
  - Data driven security
  - Ability to grow your Application by allowing future data changes
  - Shared functionality for both online viewing and producing physical reports

- Seamless integration of Business Objects into a Java/JSP application meets this and…
THE BUSINESS PROBLEM

- More…

- Parameterized screens that allow drilling, filtering and sorting

- Printing and exporting of all screens

- Adding new views of the data takes less than 30 minutes beyond the development of the report

- Take advantage of BusinessObjects security

- Built in scalability utilizing BusinessObjects clustering
AN EXAMPLE
Let's take a look at the SDK....
REPORT ENGINE SDK

- Report Engine SDK
  - Application Essentials
  - Document Management
  - Viewing Reports
  - Drilling in Web Intelligence Reports
  - Formatting Reports
  - Working with RecordSets
So where do I start? The samples....
Developer help installed with BusinessObjects has two examples:

- **JSP Tutorials**: Tutorials to learn how to use the Report Engine SDK for Web and Desktop Intelligence documents using JSP.
- **ASMX Tutorials**: Tutorials to learn how to use the Report Engine SDK for Web and Desktop Intelligence documents using ASMX.
- **Interactive Editor Integration Sample**: Demonstrates how to integrate the Interactive Editing Viewer in a third-party application. The Interactive Editing Viewer views both Web and Desktop Intelligence documents. It also allows you to create or edit Web Intelligence documents.
- **Prompt Customization Sample**: This sample demonstrates how to customize prompts of the Interactive Editing Viewer. The Interactive Editing Viewer views both Web and Desktop Intelligence documents. It also allows you to create or edit Web Intelligence documents.
- **Migrated Document Viewer Sample**: This sample is the 6.5 Document Viewer Sample migrated to BusinessObjects Enterprise XI R2. It illustrates a migration path for 5.x and 6.x WD SDK custom applications using BDE SDK and the Interactive Editing Viewer.
BUSINESSOBJECTS VIEWER SAMPLE

- Interactive Editor Integration Sample
  - Demonstrates how to integrate the Interactive Editing Viewer in a third party application. The Interactive Editing Viewer views both Web and Desktop Intelligence documents. It also allows you to create or edit Web Intelligence documents.

- Prompt Customization Sample
  - This sample demonstrates how to customize prompts of the Interactive Editing Viewer. The Interactive Editing Viewer views both Web and Desktop Intelligence documents. It also allows you to create or edit Web Intelligence documents.
So let’s look at the samples and what a simple integration looks like…
INTEGRATING INTO YOUR APPLICATION

So let’s start the integration…
USING THE VIEWER SAMPLE

- Start by copying the following from the sample:

  - **Viewer directory** – Contains all the JSPs, images, and JavaScripts for the viewer

  - **WEB-INF directory** – Contains application setup and BusinessObjects Libraries needed (If existing application you may only want the classes and lib directory)
APPLICATION FLOW

Application Flow
- Login into BusinessObjects
- Display homepage and menu
- Show requested report
  - Display report page to get parameters
  - Load the document to be refreshed by id
  - Populate prompts
  - Get the new document by report token
  - Display new report in the viewer
- Logoff
//Document Id from BusinessObjects
String strDocUID = "55222";

//Create Variables
DocumentInstance document = null;
ReportEngine reportEngine = null;

//Get a report engine and set the locale
reportEngine =
    reportEngines.getService(ReportEngines.ReportEngineType.WI_REPORT_ENGINE);

reportEngine.setLocale(strLocale);
if (strEntry.equals("")) {
    // If first time running this report get the storage token
    document =
        reportEngine.openDocument(Integer.parseInt(strDocUID));
    strEntry = document.getStorageToken();
} else {
    // If same as previous ran report with new prompts
    document =
        reportEngine.getDocumentFromStorageToken(strEntry);
}
// Save off the strEntry in case user reruns this report
session.setAttribute("sEntry", strEntry);
//Get the values passed from the report screen
String strBeginDate = request.getParameter("hdnStrtDate");

//Refreshes the Prompt array if prompts exist
document.refresh();

//Gets the prompt array
Prompts cdzPrompts = document.getPrompts();
Prompt cdzPrompt = null;
String[] avalues = new String[1];
//Set the first prompt (Notice 0 Based)
cdzPrompt = cdzPrompts.getItem(0);
avales[0] = strBeginDate;
cdzPrompt.enterValues(avalues);
//Set the remaining prompts
...
//Set the prompts and rerun the report
document.setPrompts();

//Set the token in case you rerun with new prompts
strEntry = document.getStorageToken();
OPENING THE REPORT WITH THE VIEWER

- viewDocument.jsp
  - sEntry – report token
  - id – report identifier
  - lang – en - English
  - viewType – H – HTML, I –Interactive(DHTML), P - PDF
  - kind – webi
  - sRefresh – yes – refresh the report, no – display report with current data
  - sUndoEnabled – yes or no
  - sPageMode – Listing – Draft mode, Page – Page mode

Example

viewDocument.jsp?sEntry=<%strEntry%>&lang=en&ViewType=H&sPageMode=Listing&sRefresh=yes&kind=Webi
THINGS TO REMEMBER

▶ If not all prompts are preset prior to the setPrompts() call, then the prompt screen will be displayed

▶ Prompt number is based on the order on the prompt screen when it is ran in Infoview

▶ It is recommended to disable the save option on the viewer via security or customization
CUSTOMIZING THE VIEWER

- What can be customized?

- How can I customize the viewer?
  - Via Security – WebIntelligence security can be modified to hide options and menus for the user in your application. This option is easier to implement, but permanently impacts the user for all areas in Infoview (not just while the user is in the application).
  - Via Coding – viewer.js can be modified to tailor the viewer. This option is a little more difficult to implement, but keeps the changes localized to this application only.

- So which way should I use? Depends on the business requirement.
The final customized application...
DEMO SCREENS

Integration of Webi Reports using SDK into your JSP App

Revenue

Country
- France
- US

France

<table>
<thead>
<tr>
<th>Resort</th>
<th>Service Line</th>
<th>Service</th>
<th>Revenue</th>
<th>Number of guests</th>
<th>Future guests</th>
</tr>
</thead>
<tbody>
<tr>
<td>French Riviera</td>
<td>Accommodation</td>
<td>Bungalow</td>
<td>125,240</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accommodation</td>
<td>Hotel Room</td>
<td>118,790</td>
<td>106</td>
<td></td>
</tr>
</tbody>
</table>
### DEMO SCREENS

**Integration of Webi Reports using SDK into your JSP App**

<table>
<thead>
<tr>
<th>Resort</th>
<th>Reservation Year</th>
<th>Revenue</th>
<th>Future guests</th>
<th>Number of guests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahamas Beach</td>
<td>FY2001</td>
<td>971,444</td>
<td>32</td>
<td>565</td>
</tr>
<tr>
<td></td>
<td>FY2002</td>
<td>971,444</td>
<td>3</td>
<td>565</td>
</tr>
<tr>
<td></td>
<td>Sum:</td>
<td>971,444</td>
<td>35</td>
<td>565</td>
</tr>
<tr>
<td>French Riviera</td>
<td>FY2001</td>
<td>835,420</td>
<td>17</td>
<td>440</td>
</tr>
<tr>
<td></td>
<td>FY2002</td>
<td>835,420</td>
<td>15</td>
<td>446</td>
</tr>
<tr>
<td></td>
<td>FY2003</td>
<td>835,420</td>
<td>14</td>
<td>446</td>
</tr>
<tr>
<td></td>
<td>Sum:</td>
<td>835,420</td>
<td>46</td>
<td>446</td>
</tr>
<tr>
<td>Hawaiian Club</td>
<td>FY2001</td>
<td>1,479,560</td>
<td>16</td>
<td>540</td>
</tr>
</tbody>
</table>
DEMO SCREENS

Integration of Webi Reports using SDK into your JSP App
If I get stuck, then where do I go for help?
WHAT IF I HAVE QUESTIONS LATER?

- Developer On-line Help
- Diamond Web Site http://diamond.businessobjects.com/
- BOB SDK Forum
- Email me at tom.ray@daugherty.com
CONCLUSION

- BusinessObjects WebIntelligence reports are not just reports anymore.
- Analysis gives you a powerful analysis engine right in your JSP application
- Easy to integrate and add new analysis reports to your application later.