How to Easily Integrate BIRT Reports into your Web Application

Rima Kanguri & Krishna Venkatraman
Actuate Corporation
BIRT and us – Who are we? Who are you?

- **Who are we?**
  - Rima Kanguri
    - Actuate Corporation BIRT Committer
  - Krishna Venkatraman
    - Actuate Corporation BIRT Committer

- **Who are you?**
  - Name, Company, technical background (C, SQL, java, reporting…)
  - Experience with BIRT
  - What are you hoping to get out of today’s presentation?
BIRT Tasks – Audience

- BIRT Report Users
- Advanced BIRT Users
- Deploy Experts
- Reporting Integration
- BIRT Extension
- BIRT Core Development

Easy

- Drag & Drop, Charting, Properties
- BIRT Script / ScriptAPI
- BIRT Viewer / Engine API
- Design Engine API
- BIRT Extension Points
- Eclipse Development

Hard

Presentation Focus
Agenda

- Brief Look at BIRT
- What is a BIRT Web Application?
- Creating a BIRT Web Application
- Deploying a BIRT Web Application to an application server
- Demonstration 1 – Creating a BIRT Web Application
- Demonstration 2 – Integrating BIRT in existing Web Applications
- BIRT Tag Library
- Demonstration 3 – BIRT Tag Library
- Q & A
Brief Look at BIRT
Reporting in BIRT

In Reality, this is a Continuum:

- **Operational Reporting**
  - Operational reports
  - Developer creates reports
  - Very easy end user access
  - Highly formatted
  - Multiple output formats
  - No end user training needed
  - Data access can be complex

- **Ad hoc Query & Reporting**
  - Simple ad hoc exploration of data
  - Business user creates reports
  - Fairly easy to use
  - Typically limited formatting
  - Interactive
  - Minimal training
  - Semantic layer hides complexity

- **Analytics/OLAP/Data Mining**
  - Complex “Slice and Dice” of data
  - Business user creates reports
  - More complex to use
  - Minimal formatting
  - Very interactive
  - Requires training
  - Semantic layer/data cubes

**BIRT Initial Focus**
BIRT Users & Benefits

- Minimizes Eclipse developer training
- Increase dev. productivity
- Lower costs

- Designs reports using Eclipse-based designer
- Embed pre-designed reports in application
- Creates report libraries & templates

- Focused on $, developer productivity
- End user satisfaction

- Nice looking reports
- Content as HTML and PDF

- Saves calories vs. JSP/Java
- Minutes vs. days for HTML, vs. weeks for PDF
- Minutes to modify as user requirements change
- Iterative development gets the right reports quicker

- Uses report facilities provided by Java developer
- Uses RCP based report designer
- Creates & uses report libraries & templates
High Level BIRT Architecture
Features at a Glance

Easy to use; web centric design metaphor
BIRT Market Momentum and Uptake

Sample Adopters To Date Since BIRT 1.0 Released in June 2005
“From my research, BIRT is a really big deal, it has legitimate traction in the market.”

Stephen O’Grady, RedMonk
The BIRT Web Application
What is the BIRT Web Application?

- Set of tools
  - Makes it easy to embed BIRT Reporting functionality in J2EE web applications

- It contains -
  - BIRT engine
  - BIRT viewer
  - BIRT chart engine
  - BIRT tag library

- Leverages Web Tools Project (WTP)
Creating a BIRT Web Application

- Wizard allows a user to create a new BIRT Web Project
Creating a BIRT Web Application

- Configuration dialog allows user to configure web.xml
Deploying a BIRT Web Application to an Application Server

- Easy to use wizard
- Deploys web application to specified application server
- Supports application servers such as Apache Tomcat, BEA WebLogic, IBM WebSphere, JBoss and more
Demonstration 1 - Creating a BIRT Web Application

- Create a new BIRT Web Project
- Create a new report design
- Deploy BIRT Web Application to an application server
- View the BIRT Report output
Demonstration 2 - Integrating BIRT Into Existing Web Applications

- Create a new standard Dynamic Web project
- Import BIRT Report Engine & Viewer into the web project
- Deploy BIRT Application to an application server
- View the BIRT Report output
BIRT Tag Library

- JSP tag library
- Integrate BIRT Viewer functionality in a JSP page
- Defines the following tags
  - Viewer
  - Report
  - ParameterPage
BIRT Tag Library – Viewer Tag

- AJAX based viewer
- Supports
  - Page navigation
  - Table of content view
  - Data export
- Input
  - Report design
  - Report document
- Option to prompt for report parameters
BIRT Tag Library – Report Tag

- Non Ajax based viewer
- Input
  - Report design
  - Report document
- Supports
  - Output formats - HTML, PDF, MS Word, etc.
  - Reportlets
  - Page range and page number
- Option to prompt for report parameters
BIRT Tag Library – ParameterPage Tag

- Prompts for report parameters based on the report design
- Allows users to write custom parameter page
- Supports
  - Cascading parameters
  - Dynamic parameters
Demonstration 3 – BIRT Tag Library

- Create a new JSP page with BIRT tags
- Add a Viewer tag
- Access the JSP page
Installation options

- Eclipse Update manager
- Download birt-report-designer-all-in-one package from
- Download birt-wtp-integration package from
BIRT Related Resources

- BIRT pages on Eclipse Web site
  http://www.eclipse.org/birt
- BIRT pages on Actuate Web site
  http://www.actuate.com/birt
- BIRT related blog http://birtworld.blogspot.com
- BIRT Newsgroup news://news.eclipse.org/eclipse.birt
Publications Available From Amazon
BIRT Related Sessions

1. (3644) Building Reports with BIRT · Long Tutorial
   Monday, 08:00, 10 hours | Room 3
2. (3612) Extending BIRT · Short Tutorial
   Monday, 13:30, 2 hours | Room 17
3. (3614) Report Integration - The BIRT API's · Short Tutorial
   Monday, 16:00, 2 hours | Room 17
4. BIRT: Introduction to the Eclipse Business Intelligence & Reporting Tools Project · Long Talk
   Tuesday, 13:30, 45 minutes | Room 1
5. Deploying Eclipse BIRT Report Web Applications using Eclipse WTP · Long Talk
   Wednesday, 10:15, 45 minutes | Room 2
6. Charting with Eclipse BIRT · Long Talk
   Wednesday, 11:15, 45 minutes | Room 2
7. Integrating Java code with Eclipse BIRT · Long Talk
   Thursday, 10:15, 45 minutes | Room 2
8. Dynamic BIRT Reporting · Long Talk
   Thursday, 11:15, 45 minutes | Room 2
9. Implementing a BIRT ODA driver for an XML Database · Short Talk
10. What's New For BIRT 2.2 · Demo

Please check for any updates to the schedule listed here.