#### Harness the Power of the ABL and BIRT for Business Forms Generation

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**BravePoint** 





# Agenda

BIRT Overview

BIRT Report Designer

Integrating BIRT into an OpenEdge Application





### What is BIRT?

- J2EE Based Reporting System
- Open Source
  - http://www.eclipse.org/birt/phoenix/
- Actuate
  - http://www.actuate.com/





### What is BIRT?

- Allows for the Generation of:
  - Lists
  - CrossTab Reports
  - Charting
  - Multi Column Reports
  - Letters
  - Graphics





- Report Designer
- Report Engine
- Charting Engine
- Report Viewer



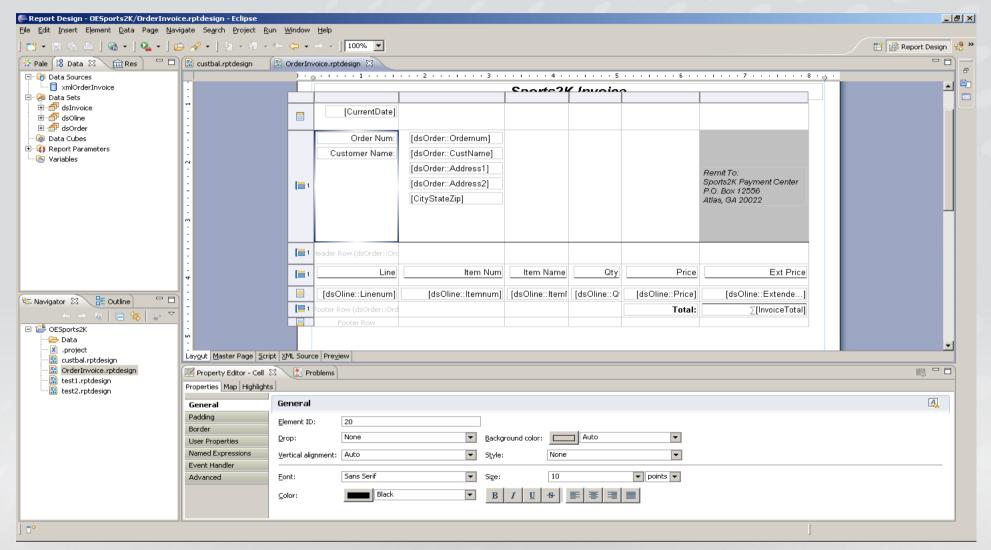


- Report Designer
  - The BIRT Report Designer is an Eclipse perspective that is used to create BIRT report designs.
  - Designs are stored in an open XML format.
  - Configured as:
    - Plug into current Eclipse environment
    - Download as a stand alone Eclipse environment
    - RPC Windows Desktop Application





# Report Designer







#### Report Engine

- Uses report design files and a specified data-source to generate and render reports.
- An API is provided allow the Report Engine to be embedded into any Java/Java EE application.
- The BIRT Report Viewer uses this API to execute and render reports.





- Charting Engine
  - The Charting Engine is used to design and generate Charts.
  - The Charting Engine API allows Java/Java EE developers to add charting capabilities to their applications.
  - The Report Design and Report Engines make use of the API to deliver Charts.





#### BIRT Viewer

- Servlet based tool for executing, rendering and interacting with a report.
- Part of the Report Designer
- Requires a servlet engine like Tomcat.
- Can be deployed by itself as a Tomcat Application.





#### • BIRT Viewer

- Provides web output as a single HTML document, paginated HTML, PDF, XLS, DOC, PPT, and Postscript.
- Additionally the viewer allows exporting the data to CSV
- Supports local and remote printing.





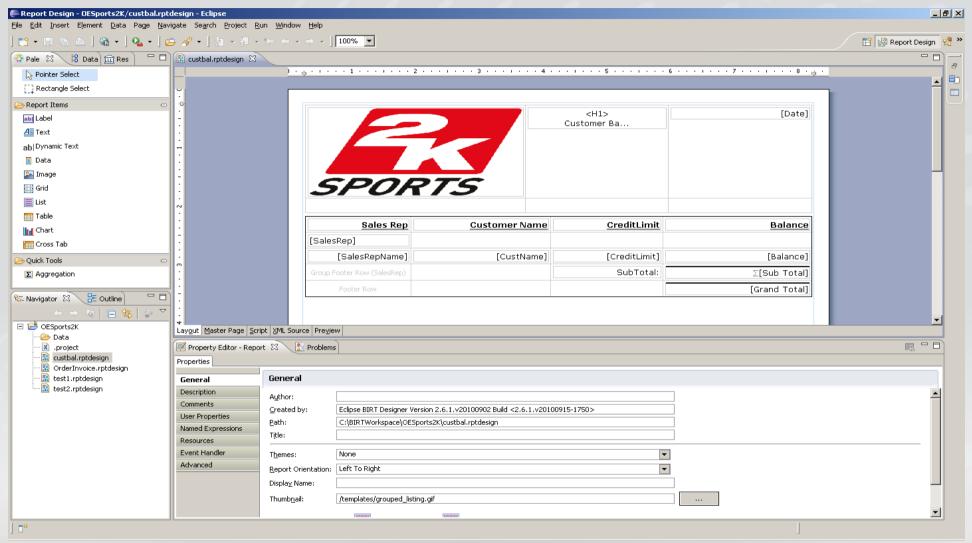
### Viewer

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BIRT Report Viewer			
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Showing page 3 of 23			∢I ∢ ▶ I▶ Go to page:
<u>Sales Rep</u>	<u>Customer Name</u>	<u>CreditLimit</u>	<u>Balance</u>
ввв	6 5 16 1	24422.2	
Brawn , Bubba B.	Cardinal Sports	21100.0	0.0
Brawn , Bubba B.	Famous Footwear	17900.0	0.0
Brawn , Bubba B.	Sports Shak	33400.0	0.0
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Brawn , Bubba B.	Irving's Sport Shops	29500.0	0.0
Brawn , Bubba B.	Jay's Sport & Trophy	17900.0	11393.9
Brawn , Bubba B.	Rei-recreational Equipment Inc	17000.0	0.0
Brawn , Bubba B.	Three Rivers Resort & Outfit	15600.0	0.0
Brawn , Bubba B.	Bud's Sporting Goods & Fntn	17900.0	11717.89
Brawn , Bubba B.	Nomad Cyclery	38600.0	
Brawn , Bubba B.	S & S Gear	48600.0	0.0
Brawn , Bubba B.	Copeland Sports	28300.0	0.0
Brawn , Bubba B.	Golden Bear Skate Shop	16600.0	0.0
Brawn , Bubba B.	Southwest Dart & Billiard	13700.0	0.0
Brawn , Bubba B.	Edington's Fine Golfwear	33400.0	19268.49
Brawn , Bubba B.	All Sports	40300.0	0.0
Brawn , Bubba B.	Main Event	34600.0	6144.51
Brawn , Bubba B.	Golf Augusta Pro Shop	45300.0	16669.64
Brawn , Bubba B.	Tink's Sport Stop	21300.0	12645.81
Brawn , Bubba B.	Rocky's Sporting Goods	23500.0	11037.53
Brawn , Bubba B.	Just For Kicks Soccer Ctr	8700.0	0.0
Brawn , Bubba B.	Ready's Home Recreation	6300.0	1251.45
Brawn , Bubba B.	Skagway Sports Emporium	44000.0	19075.0
Brawn , Bubba B.	Arctic Gunworks	31900.0	0.0
Brawn , Bubba B.	Western Auto	10000.0	0.0
		SubTotal:	\$ 767,558.66
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Pitt , Dirk K.	Aerobics valine Ky	13500.0	1112.44
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# Report Designer







- Templates provide a quick start to report generation
- Data Sources
  - Direct DB Connection via JDBC/SQL
  - XML as a Data Source
  - Combination of XML and Direct DB Connection
  - Support Calculated Columns
  - Filter
  - Joined





- Data Set
  - Derived from your DataSource
  - Typically Identifies a table from your DataSource
  - DataSet columns are placed onto a Report Canvas
    - Report Object on the canvas are automatically bound to a DataSet Column.





- Report Components
  - Data bound Columns
  - Tables
  - Grids
  - Images
  - Crosstab
  - Calculated Fields
  - Labels





- Supports
  - Filtering
  - Sorting
  - Aggregation
  - Calculated Columns





# Demo I Report Designer







# OpenEdge Integration

- ABL Provides:
  - DB Query
  - Business Logic
  - Data Transformation
  - Generate XML Datasource
    - DataSet
    - TempTable

#### **BIRT**

Renders the Report UI





# OpenEdge Integration (Option 1)

- Report Engine Command Line
  - Renders the Report as PDF or HTML output file





# OpenEdge Integration (Option 2)

- Viewer via a URL
  - URL References the Report and DataSource as parameters
  - BIRT Report Viewer
    - Executes Report
    - Renders Report
  - Requires Tomcat





### **Command Line**

```
"C:\Program Files\birt-runtime-2_6_2\ReportEngine\genReport"
-f PDF
-p "DataFileLocation=C:\Data\Customer.xml"
-o "C:\Data\Customer.pdf"
"C:\Reports\customer.rptdesign"
```





### **Command Line**

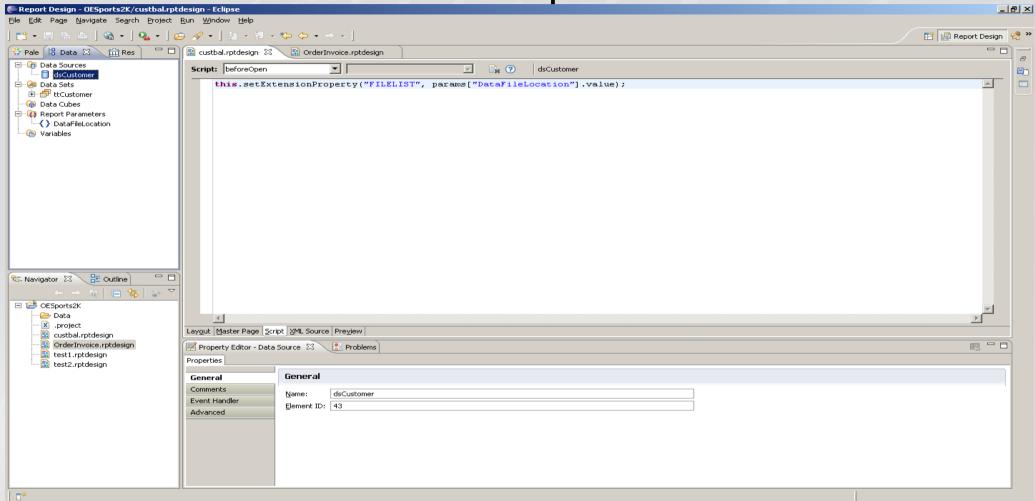
- Command Line Options
  - -f Format (HTML or PDF)
  - -o Target File
  - -p Parameter
  - -t HTML Type
  - -F Parameter File
  - -e Encoding





## OpenEdge Integration

DataSet Passed as a Report Parameter







### **BIRT Viewer**

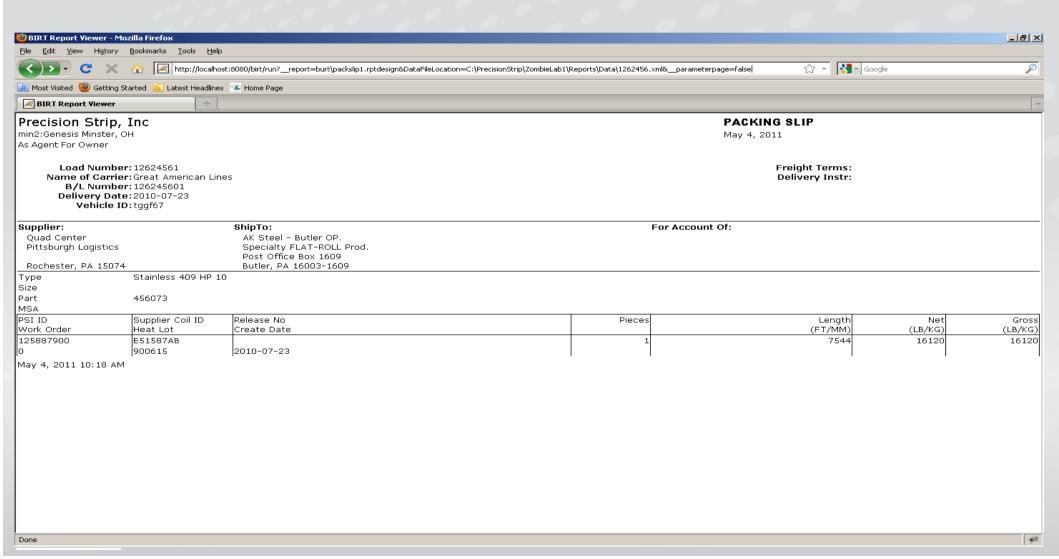
- The BIRT Viewer Servlet handles three mappings:
  - The /frameset mapping renders the report in the full AJAX viewer complete with toolbar, navigation bar and table of contents features.
  - The /run mapping runs and renders the report but does not support AJAX Features.
  - The /preview mapping runs and renders the report but does does not support AJAX feature. The output from the run and render operation is sent directly to the browser.





### Servlet URL

http://localhost:8080/birt/run\_\_report=burt\packslip1.rptdesign
&DataFileLocation=C:\PrecisionStrip\ZombieLab1\Reports\Data\12624
56.xml&\_\_parameterpage=false



### Servlet URL

http://localhost:8080/birt/frameset\_\_report=burt
\packslip1.rptdesign
&DataFileLocation=C:\PrecisionStrip\ZombieLab1\Reports\Data\12

62456.xml& parameterpage=false 🖏 BIRT Report Viewer - Mozilla Firefox 그리의 Edit View History Bookmarks Tools Help The proof of the p 🔼 Most Visited 🕙 Getting Started 🔊 Latest Headlines 🎏 Home Page **BIRT Report Viewer BIRT Report Viewer** 🖻 🖻 🖹 🖺 🕹 Showing page 1 of 2 PACKING SLIP Precision Strip, Inc. min2:Genesis Minster, OH May 4, 2011 As Agent For Owner Load Number: 12624561 Freight Terms: Name of Carrier: Great American Lines **Delivery Instr:** B/L Number: 126245601 Delivery Date: 2010-07-23 Vehicle ID: taaf67 Supplier: ShipTo: For Account Of: Ouad Center AK Steel - Butler OP. Specialty FLAT-ROLL Prod. Pittsburgh Logistics Post Office Box 1609 Rochester, PA 15074 Butler, PA 16003-1609 Stainless 409 HP 10 Type Size Part 456073 MSA Supplier Coil ID PSI ID Release No Lenath Net Pieces Gross Work Order Heat Lot Create Date (FT/MM) (LB/KG) (LB/KG) 125887900 E51587AB 7544 16120 16120 900615 2010-07-23 May 4, 2011 10:19 AM

### Servlet Parameters

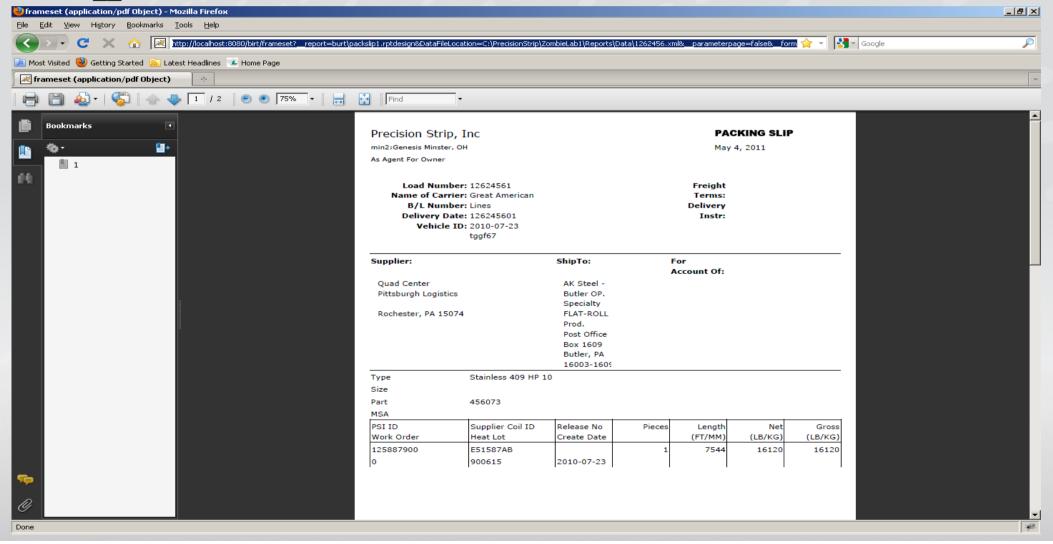
- format PDF,HTML,DOC,PPT,XLS
- \_\_title Report
- \_\_parameterpage
- \_\_page
- \_\_pagerange





### Servlet Parameters

http://localhost:8080/birt/frameset?
\_\_report=burt\packslip1.rptdesign&DataFileLocation=C:\Precision
Strip\ZombieLab1\Reports\Data\1262456.xml&\_\_parameterpage=false
&\_\_format=PDF



# Demo II Integration







# Questions





