

The Market Leader in Open Source Business Intelligence

Web 2.0 Business Intelligence with JasperSoft

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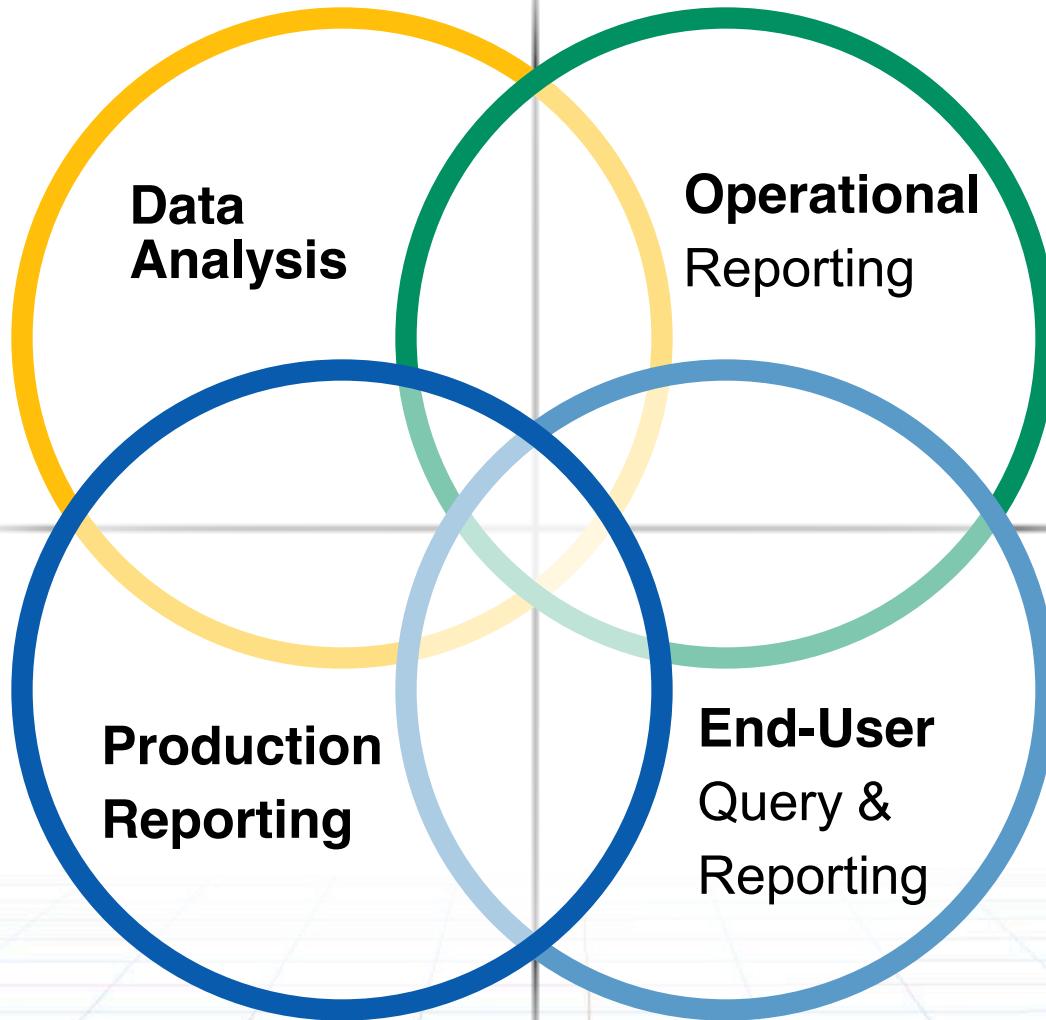
Snapshot

- ▶ Company and products founded in 2001, privately held
- ▶ Headquartered in San Francisco, CA
- ▶ OEM'd by MySQL to deliver operational and production reporting
- ▶ 8,000+ commercial customers in 96 countries
- ▶ Millions of downloads, tens of thousands of registered users, hundreds of JasperForge projects
- ▶ More than 30 global partners including:



JasperSoft Focus

Four Core BI Usage Areas



JasperSoft Business Intelligence Suite

JasperReports



Report
Development
Library



Developers

JasperStudio



Graphical Interactive
and Production Report
Designer



Developers
& Power-
Users

JasperServer



Interactive, Ad Hoc, and
Managed Query and
Reporting Server



Business
Users

JasperAnalysis

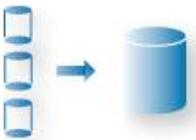


Interactive OLAP
Data Analysis



Business
Users

JasperETL



High Performance
Data Integration

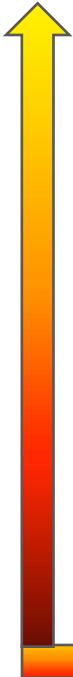


Developers
& DBAs

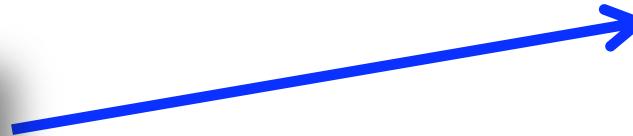
The Power and the Usability

Report Design

Power



iReport



Usability



JasperServer
Ad Hoc

The Power and the Usability

Data Analysis

Power



JasperAnalysis



JasperServer
Integrated Analysis

Usability

What Web 2.0 Means to JasperSoft

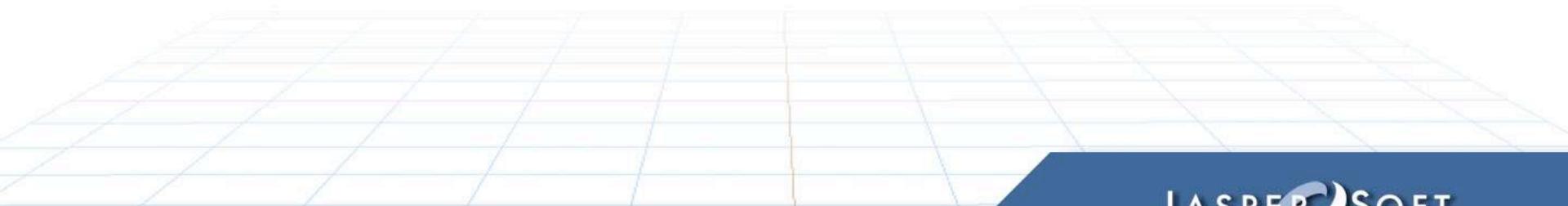
- **Web 2.0**

- Web 2.0 is Ajax plus other cool rich-client-like capabilities in a Web browser
 - Interactive web (e.g. “drag & drop”)
 - Composite applications (e.g. “Mash-ups”)
 - Embeddable into other sites (e.g. social networking), etc.

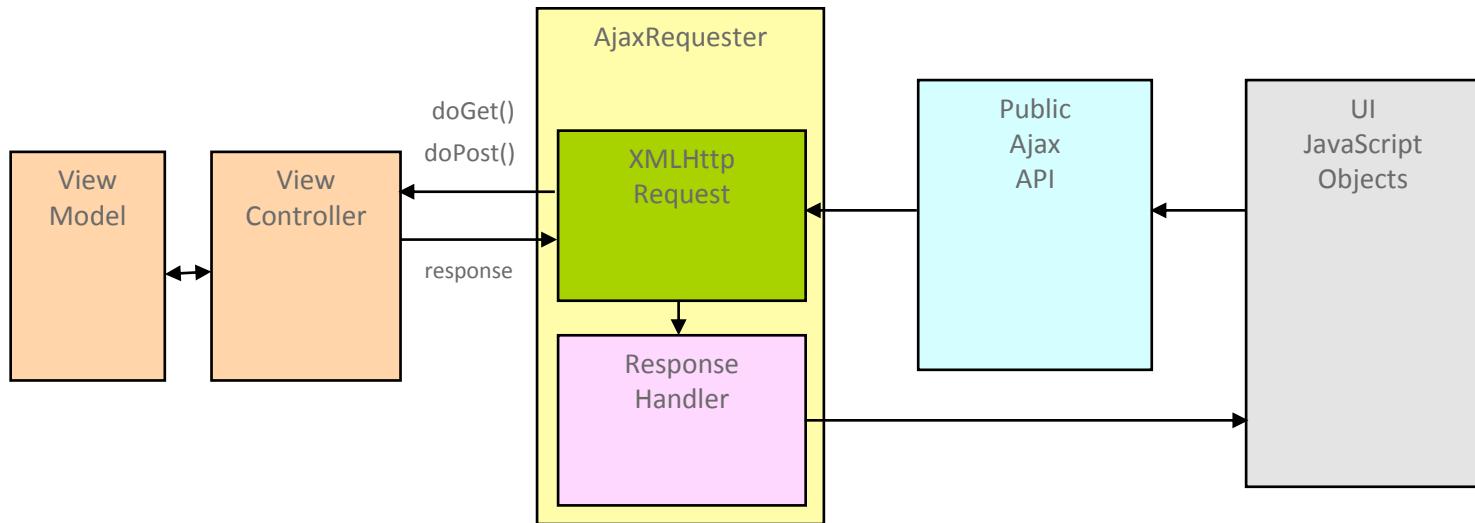
- **What is Ajax?**

- **A**synchronous **J**ava**S**cript **a**nd **X**ML
 - Techniques used for creating interactive web applications
 - Exchange small amounts of data with the server “behind the scenes” (asynchronous)
 - Entire web pages do not have to be reloaded
- JavaScript is the usual scripting language
- Cross-platform across operating systems and browsers
- Free and open source implementations of suitable frameworks and libraries

Architecture



JasperSoft's Ajax Engine



- **Proprietary, pluggable JavaScript module**
 - Manage requests from and responses to a web browser in an asynchronous fashion
- **Built around the XMLHttpRequest API**
 - Potential to be extended to encompass alternate asynchronous transfer protocols as and when required

JasperSoft Ajax Engine Components

- **JasperSoft Public API**
 - Designed for simplicity and ease of use
 - Encapsulates the technology and details
 - Client applications can easily embed Ajax technology with little or no knowledge required on the part of the application developer
- **AjaxRequester**
 - Internal heart of the JasperSoft Ajax Engine - JavaScript object supporting the public API
 - Incoming Ajax requests are administered by the public API
 - Create an instance of an AjaxRequester to manager the life cycle of the request
 - Culminates in an update to the requesting client (when appropriate)
- **AjaxUpdate() Function**
 - Instantiates and manipulates the AjaxRequester object based on incoming requests
- **Response Handler**
 - Take the streamed response generated by the RequestHandler and feed it back to the requesting client in the appropriate manner
- **Error Handler**
 - Includes a placeholder for an ErrorHandler function which can be optionally passed in via the public API

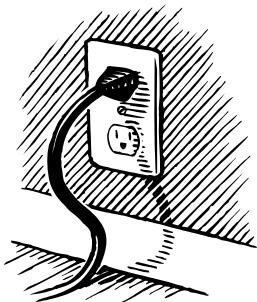


Ajax: Off-the-Shelf vs. Homegrown



- **Off-the-Shelf**

- Dojo library is quite heavyweight
 - Large JavaScript upload affects performance
- Google Gears is great but some loss of control
 - Emits JavaScript, but can't control exact JavaScript
 - Not pluggable - e.g. ability to plug-in a drag & drop component



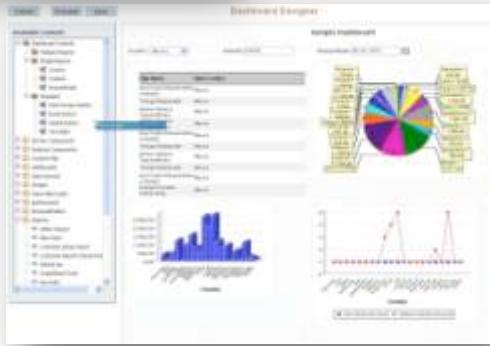
- **Homegrown**

- Pure Ajax very lightweight and easy to implement
 - Maximum extensibility, totally pluggable
 - Maximum platform independence - test the capability, not the specific version e.g.

```
if tree node = "Sales Report"
  var label = treeNode.innerText?
    treeNode.innerText;
    TreeNode.textContent
```

JasperSoft Ad Hoc System Architecture

Rich, Intuitive Web-Based User Interfaces for Business Users



- **Leveraging web 2.0 technologies**

- Present the user with an interactive, continually updated view
- Based on real time data
- Directly modifiable using drag and drop actions and point and click menus
- Homegrown pluggable drag & drop engine
- Using Nanotree for tree control
 - Customized by adding drag & drop and dynamic icon substitution e.g. file copy permission

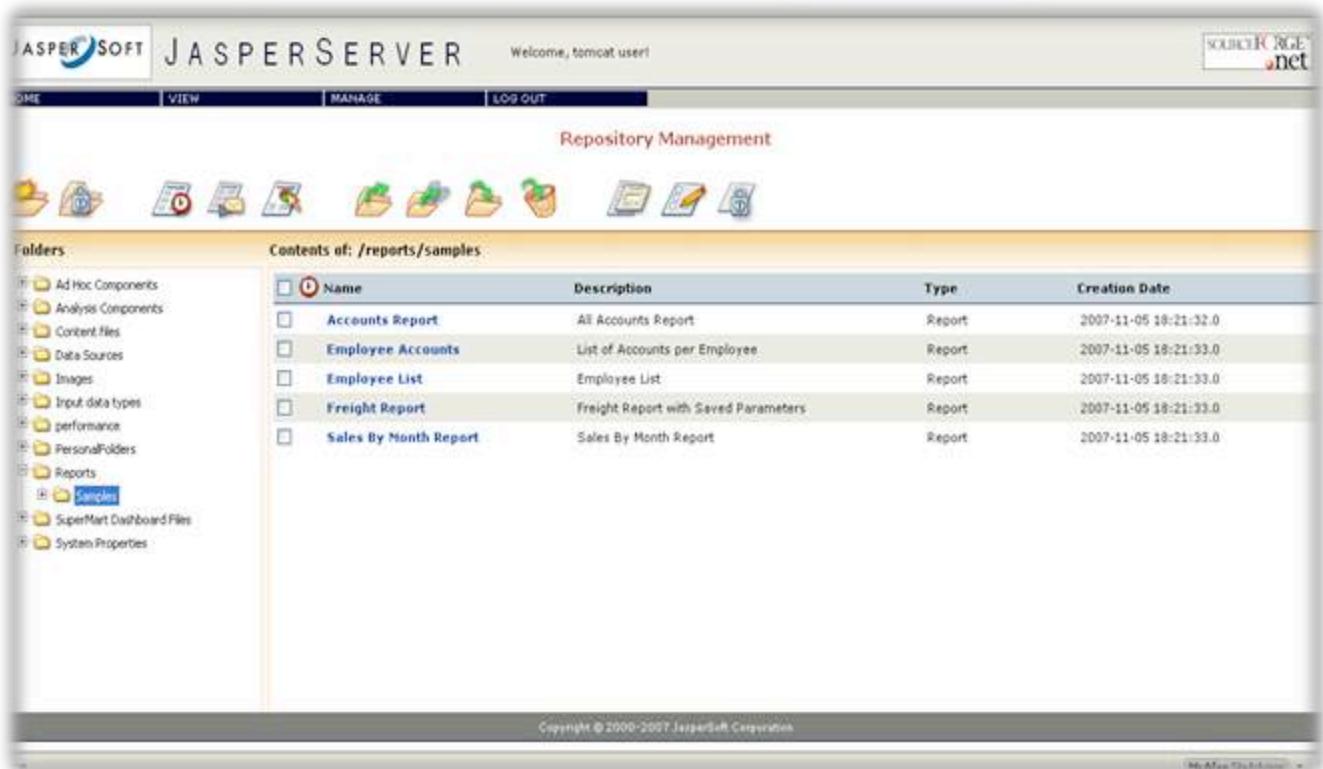
- **Used across JasperServer Web UIs**

- Report Designer
 - Tables, crosstabs and charts
- Query Designer
- Dashboard Designer
- Repository Manager
- Report parameter input controls, etc.

Enhanced Repository Manager

Repository Service and Standard User Interface

- **Easier to use**
- **Intuitive tree control**
- **Web 2.0 drag & drop copy and move**
- **Improved icons / look & feel**



The screenshot shows the JasperSoft Repository Management interface. The top navigation bar includes links for HOME, VIEW, MANAGE, and LOG OUT. The main title is 'JASPER SERVER' with a sub-header 'Repository Management'. The left sidebar displays a tree view of 'Folders' containing items like Ad Hoc Components, Analysis Components, Content Files, Images, Input data types, performance, PersonalFolders, Reports, Samples, SuperMart Dashboard Files, and System Properties. The right panel shows the 'Contents of: /reports/samples' with a table listing five reports: Accounts Report, Employee Accounts, Employee List, Freight Report, and Sales By Month Report. Each report entry includes a checkbox, the report name, a description, its type (Report), and its creation date (2007-11-05 18:21:32.0).

Name	Description	Type	Creation Date
Accounts Report	All Accounts Report	Report	2007-11-05 18:21:32.0
Employee Accounts	List of Accounts per Employee	Report	2007-11-05 18:21:33.0
Employee List	Employee List	Report	2007-11-05 18:21:33.0
Freight Report	Freight Report with Saved Parameters	Report	2007-11-05 18:21:33.0
Sales By Month Report	Sales By Month Report	Report	2007-11-05 18:21:33.0

Web 2.0 Dashboard Builder

- **Drag & drop reports onto Dashboard**
- **Dynamic resize & layout**
- **Global controls**
 - Input parameters
 - Other controls
- **“Twinkling” dashboards**
 - Dynamic frame refresh in seconds

Dashboard Designer

Sample Dashboard

Country: Mexico OrderId: 10600

Ship Name Ship Country

Ana Trujillo Emparedados y helados	Mexico
Tortuga Restaurante	Mexico
Antonio Moreno	Mexico
Taqueria El Gato	Mexico
Antonio Moreno	Mexico
Ana Trujillo Emparedados y helados	Mexico
Tortuga Restaurante	Mexico
Antonio Moreno	Mexico
Taqueria El Gato	Mexico
Antonio Moreno	Mexico
Parcels Comidas del Oeste	Mexico

RequestDate: 06-01-1997

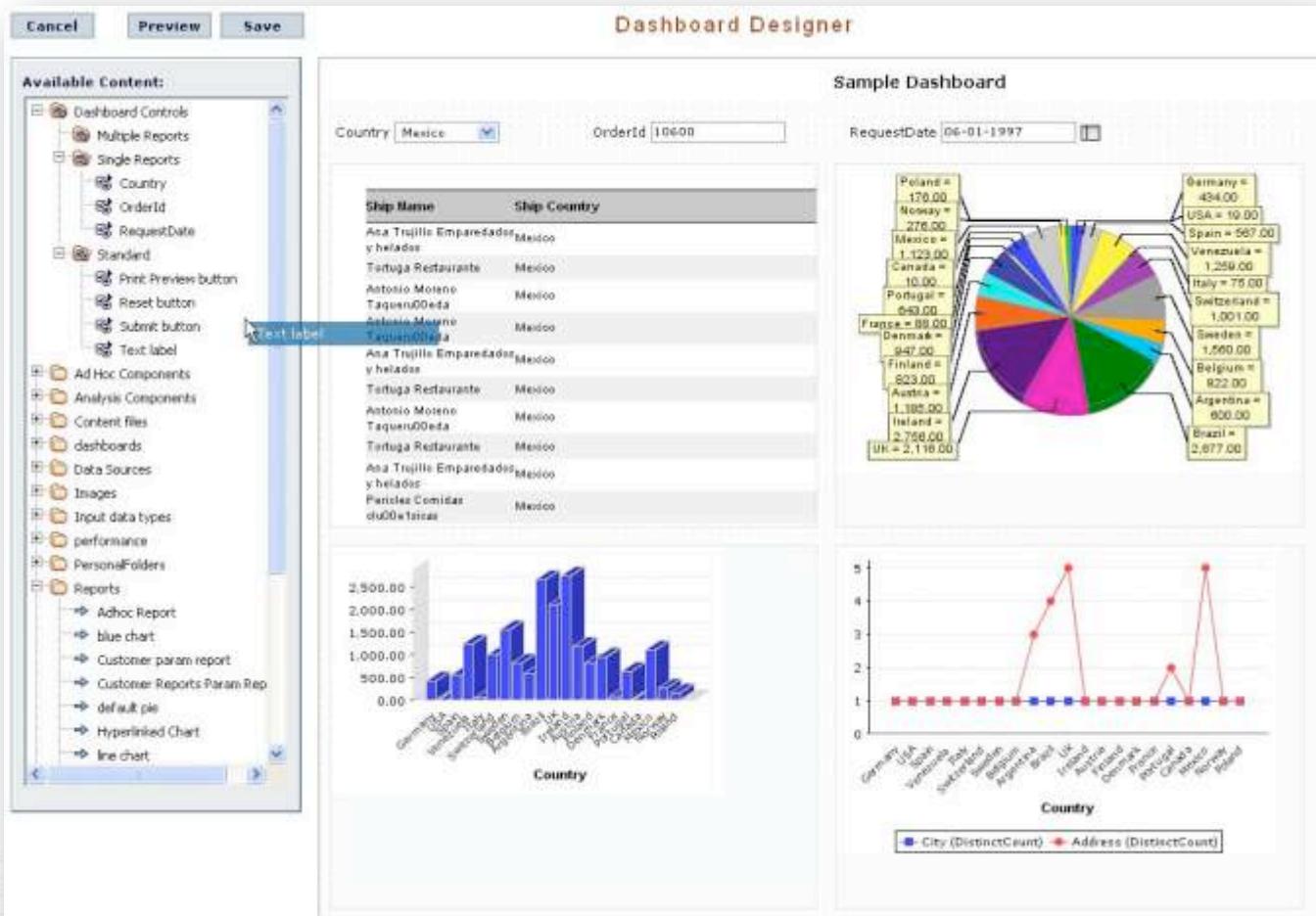
Poland = 170.00
Norway = 276.00
Mexico = 1,123.00
Canada = 10.00
Portugal = 63.00
France = 89.00
Denmark = 947.00
Finland = 823.00
Austria = 1,395.00
Iceland = 2,766.00
UK = 2,116.00

Germany = 434.00
USA = 19.00
Spain = 567.00
Venezuela = 1,259.00
Italy = 75.00
Switzerland = 1,001.00
Sweden = 1,560.00
Belgium = 922.00
Argentina = 800.00
Brazil = 2,677.00

RequestDate: 06-01-1997

Country

City (DistinctCount) Address (DistinctCount)



Demo

Support for Enterprise Portals



The image displays three screenshots of Liferay portlets. The first portlet shows a bar chart with 'Total Freight' and 'Average Freight' data for countries like France, Mexico, UK, USA, and Venezuela. The second portlet shows two donut charts for 'Revenue' and 'Profit'. The third portlet is a 'Report List' showing a table of accounts and employees.

Example of two JasperServer reports and a list of reports running within a Liferay instance.

- Optimal for showing information from multiple sources
- JSR-168 portlet for running reports within Liferay
 - Includes support for single-sign on, selecting reports, pagination, and input controls
 - Portlet integrates with JasperServer via Web Services
 - Allows it to run with Liferay in any environment
- Built-in Liferay portal server
 - Out-of-the-box usability with over 60 portlets pre-bundled
 - Built-in Content Management System (CMS)
 - Collaboration suite
 - Personalized pages for all users
 - Benchmarked as among the most secure portal platforms using LogicLibrary's Logiscan suite

Demo

JasperServer



Web 2.0 Ad Hoc Reporting

Business User Self-Service

- **Intuitive web-based report design**
 - Drag-and-drop AJAX interface
 - Tables and crosstabs
 - Charts: pie, bar, line, area, etc
 - Point & click aggregation functions: sum, average, etc.
 - Custom fields & formulas
 - WYSIWYG + live data
- **Customizable user interface**
 - Ad Hoc Editor HTTP API
- **Semantic layer**
 - Insulate the user from the technical concepts such as tables/columns/joins

The image displays three distinct views of the JasperServer reporting platform, illustrating its adaptability across different devices and interfaces:

- Top View (Web Browser):** Shows the "Ad Hoc Editor" interface. The main panel displays a table titled "SuperMart Store Information" with columns for Store ID, Store Type, Store Name, Manager, Store Sales, and Profit. Below the table is a bar chart titled "Freight/Total per City" showing freight costs across different cities.
- Middle View (Mobile Device):** Shows a table titled "Ship-By-Date" with columns for Ship Date, Ship City, Ship Region, and Ship-City. The data is grouped by ship date and ship city, showing the number of packages and total weight for each.
- Bottom View (Laptop):** Shows a table titled "Ship-City: AllRegions" with columns for Ship-City, Ship-Region, Ship-City, and Total-Cost. The data is grouped by ship city and region, showing the total cost for each.

Business User Ad Hoc Query

Business View of Data Source

Select a topic, or choose a business view to create your own query. Then choose the report type.

Saved Topics Business Views

- Business Views
 - Marketing (highlighted)
 - Sales
 - Finance
 - Employees

Table

Chart

Crosstab

All data of interest to folks in Marketing.

Start Query Cancel

Create Ad Hoc Data

Select a data source: Opportunities

FIELDS

DISPLAY

TOPIC

Choose items to include in your report:

- Amount
- Close Date
- Created Date
- Description
- Expected Amount
- Fiscal Period
- Fiscal Quarter
- Fiscal Year
- Forecast Category
- Has Line Item
- Opportunity ID
- Closed
- Deleted
- Account ID - Account
- Campaign ID - Campaign
- Created By ID - User
- Last Modified By ID - User
- Owner ID - User
- Price Book ID - Price Book
- Account Partner(Opportunity ID)
- Activity History(Opportunity / Account ID)

Selected items:

- Amount
- Close Date
- Created Date
- Description
- Expected Amount
- Fiscal Period
- Fiscal Quarter
- Fiscal Year
- Forecast Category
- Has Line Item
- Opportunity ID
- Account ID - Account
- Closed
- Deleted

Preview Data Set Sorting

Cancel < Back Next > Done

Ad Hoc Editor

Available Fields

Customer Name	Customer ID	Customer Status	Customer Type	Product Category	Product Subcategory	Product Name	Product Description	Product Quantity	Product Price	Product Tax	Product Total	Product Status	Product Type	Product Description	Product Quantity	Product Price	Product Tax	Product Total			
Customer 1	123456789	Active	Residential	Electronics	Smartphones	iPhone 12	Apple iPhone 12	1000.00	1000.00	0.00	1000.00	Active	Residential	Electronics	Smartphones	iPhone 12	Apple iPhone 12	1000.00	1000.00	0.00	1000.00
Customer 2	987654321	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 3	543210987	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 4	432109876	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 5	321098765	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 6	210987654	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 7	109876543	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 8	987654321	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 9	876543210	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 10	765432109	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 11	654321098	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 12	543210987	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 13	432109876	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 14	321098765	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 15	210987654	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 16	109876543	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 17	987654321	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 18	876543210	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 19	765432109	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Residential	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00
Customer 20	654321098	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00	Active	Commercial	Electronics	Smartphones	Samsung Galaxy S21	Samsung Galaxy S21	1200.00	1200.00	0.00	1200.00

Business User Ad Hoc Query & Analysis

- **Business user abstraction of any data source**

- Metadata Domains and graphical designer
 - Data sources, dimensions, measures, joins, groups, filters, hierarchies
 - Calculated and derived fields
 - Handles complex and large schemas
 - Auto-generation / graphical designer / validation
- Row/column (cell) level security by user/group
- Secure repository object + portable open XML format

- **Web 2.0 Ad Hoc Query for Business Users**

- Drag & drop dimensions, measures, filters
- Query generation engines
 - Query language independent architecture
 - Initially “SQL” and “Custom” implementations
 - Query governor
- Save-as Topic (re-use query for multiple reports)
- Seamless transition to ad hoc report designer
- JasperStudio / iReport on metadata Domain data sources



Web-Based Domain Designer

For DBAs / IT Users

File Edit View

Tables **Joins** Design XML

Select a field from each tree, then click Join to link the two tables.

Left Table: Right Table:

Customer Customer
 Region Region
 Sales Sales
 Products Products
 Product Categories Product Categories

Join

Current Joins:

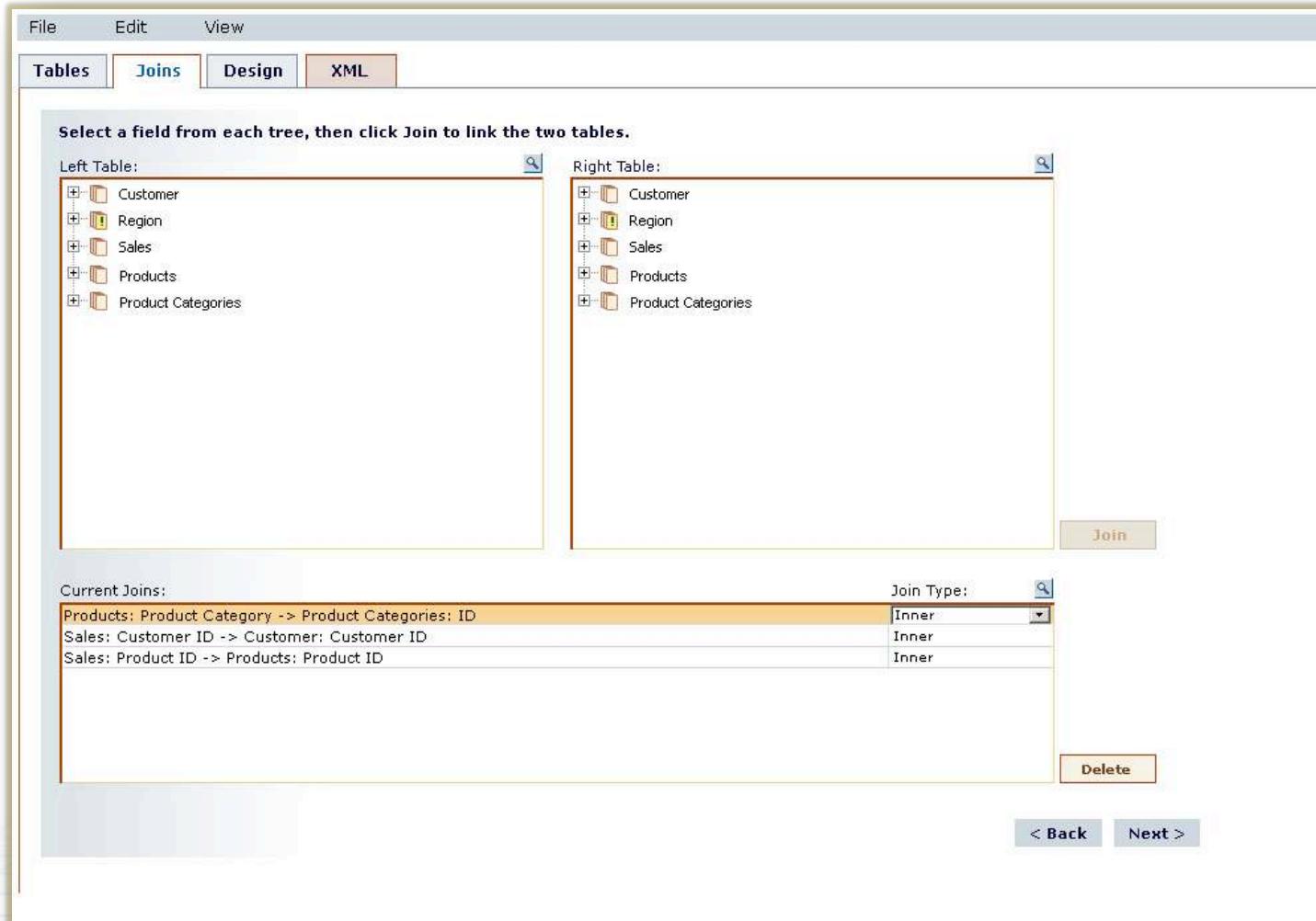
Products: Product Category -> Product Categories: ID Join Type: Inner

Sales: Customer ID -> Customer: Customer ID Inner

Sales: Product ID -> Products: Product ID Inner

Delete

< Back Next >



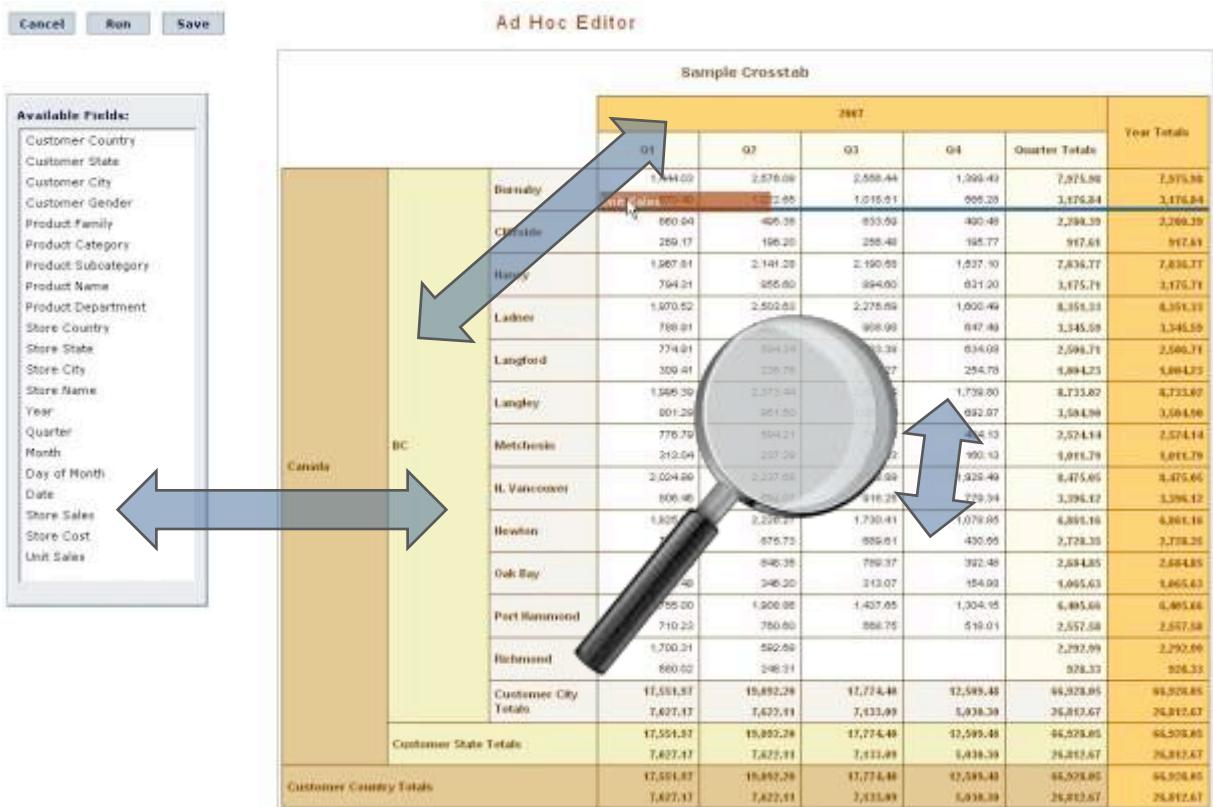
Demo

Sneak Peak - Futures

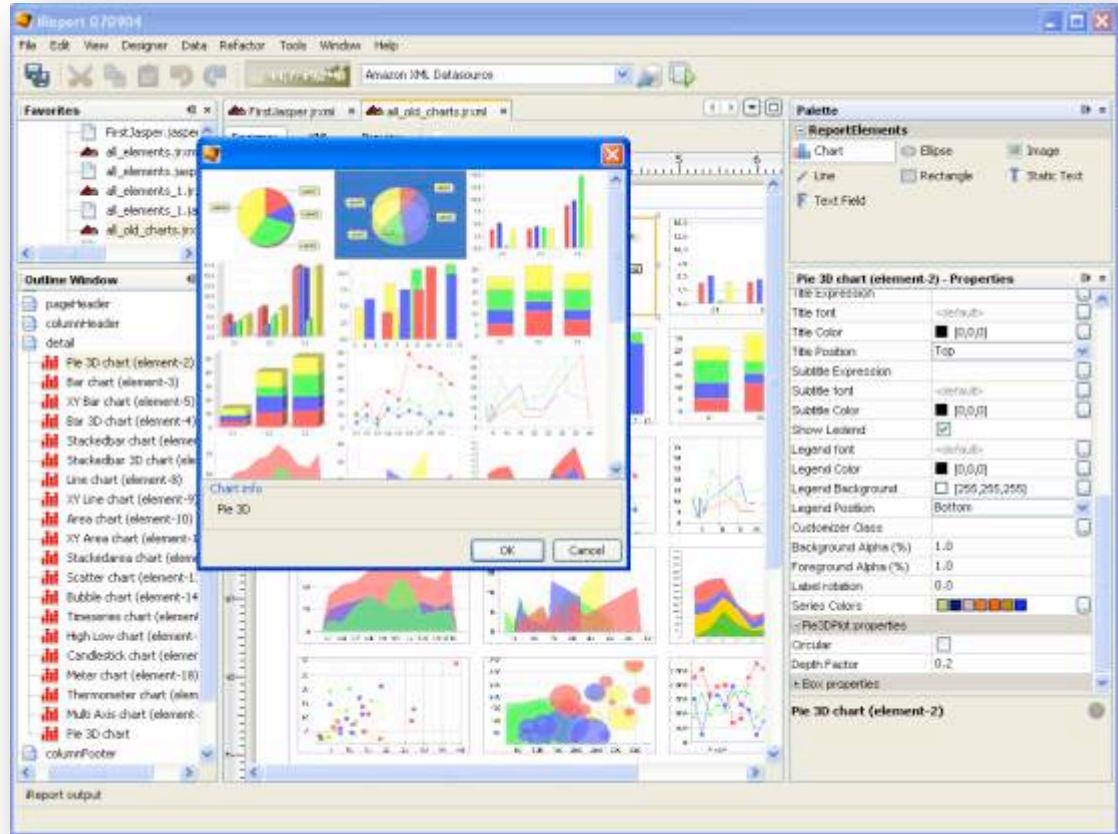
Web 2.0 Integrated Analysis on Reports

Lightweight Analysis Complement to JasperAnalysis

- **Uses metadata Domains**
 - Hierarchies
- **Extension of current Web 2.0 ad hoc**
 - Drag in/out dimensions & measures
 - Pivot
 - Drill
- **Scalability**
 - Queries processed by datasource (e.g. RBDMS)
 - In-memory caching



iReport for NetBeans

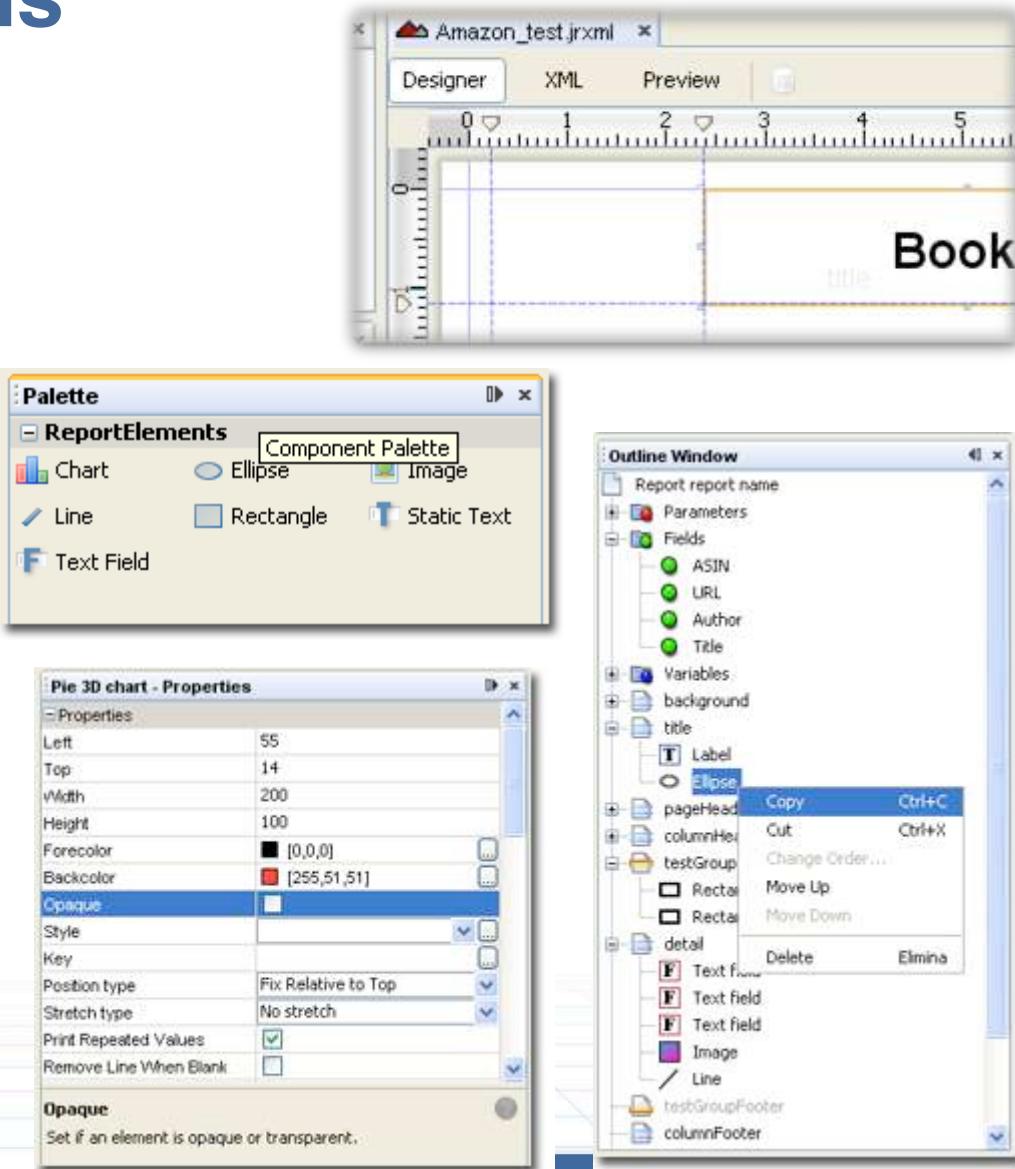


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9. Drag-And-Drop
10. Substance NetBeans...

iReport for NetBeans

- **Based on NetBeans 6.0**
 - Standalone rich-client or IDE plug-in
- **Ease of use improvements**
 - Extended drag & drop
 - Integrated preview window
 - New integrated xml editor for "hardcore" designers
 - New rulers to align elements using guidelines.
 - Main designer has been totally rewritten using the Sun's Visual Library API providing improved zoom capabilities and a more precise grid to align elements
 - Movement precision has been increased when working with zoom ratios other than 100%
 - New outline window
 - Drag elements from a band to another
 - Reorder elements
 - Copy and paste nodes
 - New report elements palette
 - New property sheet with Undo/Redo changes



Demo

Q & A

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