

Any User. Any Data. Any Deployment.

Data
Sheet



Eclipse Business Intelligence and Reporting Tools [BIRT] Project



BIRT is an Eclipse-based, open-source reporting platform for web applications, especially those based on Java and J2EE. BIRT has two main components: a report designer based on Eclipse, and a run-time component that you can deploy to your application server. BIRT also has a charting engine that lets you include charts in your BIRT Reports or add stand-alone charting capabilities to Java applications.

Report Designer

Application development with BIRT starts with the report designer. This Eclipse-based interface offers an HTML page-oriented design metaphor (similar to Adobe Dreamweaver and other HTML editors) to build reports that are intuitive to create and integrate easily into web applications. Key components include:

- **Data Explorer**—Manages your data sources (connections) and data sets (queries)
- **Layout View**—WYSIWYG editor that provides drag-and-drop creation of the presentation portion of your report
- **Report Item Palette**—A palette with a rich set of visual elements such as containers (tables, grids, lists), labels and others
- **Expression Builder**—Provides an interface to create calculated fields, format existing ones or perform other data-oriented calculations
- **Style Builder**—Creates and manages CSS-like styles for consistent formatting
- **Property Editor**—Presents the most commonly used properties in a convenient format, which makes editing quick and easy
- **Report Preview**—Allows you to test your report at any time with real data
- **Code Editor**—Edits custom business logic to be executed during data access, report generation, or viewing
- **Chart Wizard**—Defines and formats charts and their accompanying legends and axes

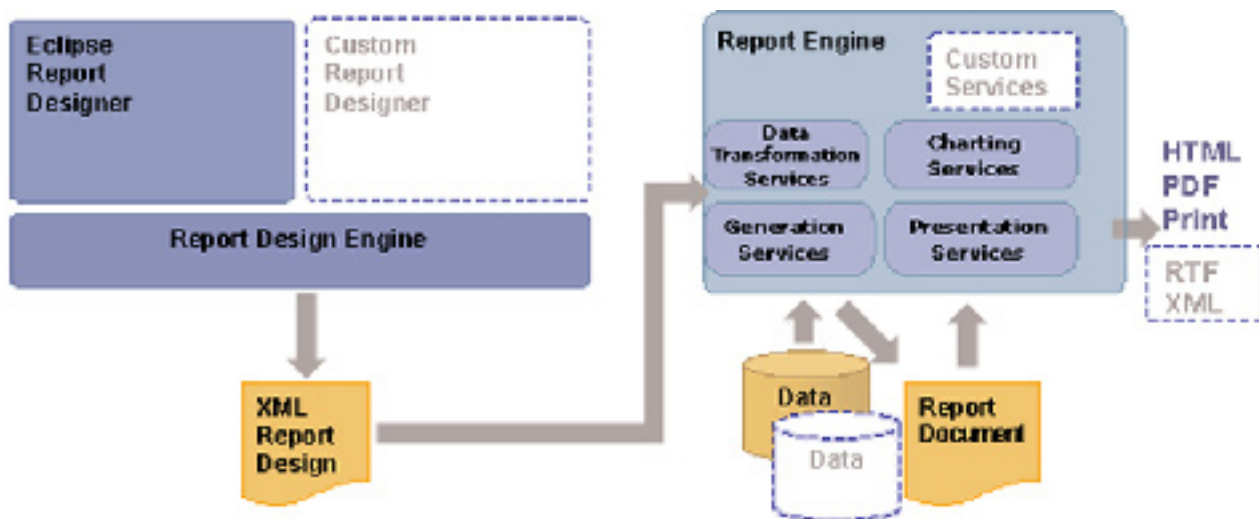
- **Outline**—Provides a compact overview of your entire report structure
- **Cheat Sheets**—Offer step-by-step instruction on commonly performed tasks to shorten the learning curve

BIRT provides two flavors of designer: a plug-in for the Eclipse IDE, and a Rich Client Platform (RCP) version that offers a simplified interface without a need for the additional perspectives in the standard Eclipse platform.

Report Design File

The report design file, as expressed by the BIRT Report Object Model (ROM), is the key design “artifact” associated with a report. It contains the elements that make up a report, including visual design components such as a table or an image, and other non-visual items such as report parameters, formatting styles and data sources.

The designer allows the user to define these elements, the design file stores the elements in an XML format adhering to the ROM, and the report engine interprets the elements to produce a report document as output.



Report Engine and the BIRT Viewer

The BIRT Report Engine API allows you to integrate the run-time part of BIRT into your application as a set of POJOs (Plain Old Java Objects). The engine enables you to discover the parameters defined for a report and get their default values, incorporate included images or charts, retrieve needed data and transform it as necessary and, finally, render the report in HTML or PDF. Report execution also encompasses execution of any custom business logic associated with the report that is written in JavaScript or Java.

Included with the BIRT distribution is a sample BIRT viewer. It is used within the report designer for the preview operation, but can also be used as a simple user interface in your Java application to prompt for report parameters prior to report execution via the report engine API.

Chart Engine

The chart engine provides a rich business chart generation capability to be used as a standalone or invoked from the report engine. The chart engine supports creation of pie, bar, line, scatter and stock charts, all of which can be rendered in the following graphic formats: 8-bit images, 24-bit images, SWT graphics (GC), SWING graphics (Graphics2D) and SVG.

Design Engine API

The BIRT Design Engine API (DEAPI) enables the programmatic creation or modification of report designs and also provides for interrogation of report elements and semantic checking.

Extensibility

BIRT is more than a reporting tool; it is an extensible reporting framework. As such, it provides a number of extension points to support application-specific and general-purpose modifications. These include:

- *The Open Data Access (ODA) framework, which enables the addition of new data sources to BIRT. It provides for both a run-time driver and a design-time user interface.*

- *Custom scripting to incorporate complex and/or application-specific business logic into report designs.*
- *APIs that permit the introduction of new visual components into reports and new attributes for existing components.*
- *Pluggable architecture for incorporating custom charts and new graphic formats into the charting engine.*
- *A flexible engine that provides the capability to create completely new report output formats such as SVG, RTF and many more.*

Internationalization

BIRT is Unicode enabled, and supports creation of reports in any locale, with the exception of right-to-left languages.

To Find Out More

To download the latest version of BIRT, learn more or join the Eclipse community, please visit www.eclipse.org/birt/.