BIRT Information Objects are virtual metadata views of corporate information presented in business-friendly terms to Actuate products, including e.Report Designer, BIRT Spreadsheet Designer, IRT Designers and BIRT Studio. BIRT Information Objects harness the power of XML-driven Enterprise Information Integration (EII) technologies to combine disparate data sources in real time, which accelerates superior decision making across 100 percent of the enterprise.

The BIRT Information Object Designer tool provides the powerful development environment that enables database developers to create controlled views of enterprise data for end-user querying. With BIRT Information Object Designer, developers create BIRT Information Objects that pull and integrate real-time data from any number of heterogeneous data sources. With its visual programming environment, BIRT Information Object Designer helps reduce end-user dependence on IT intermediaries while simultaneously ensuring security and control over data access.

Whether the data end users need resides in multiple data warehouses, transactional applications or custom legacy data sources, BIRT Information Objects ensure that reporting applications efficiently deliver meaningful information to end users and adhere to corporate data standards.
Overview

BIRT Information Objects are virtual metadata views of corporate information presented in business-friendly terms to Actuate products, including e.Report Designer, BIRT Spreadsheet Designer, Actuate BIRT Designers, and BIRT Studio. BIRT Information Objects harness the power of XML-driven Enterprise Information Integration (EII) technologies to combine disparate data sources in real time, which accelerates superior decision making across 100 percent of the enterprise.

The BIRT Information Object Designer provides the powerful development environment that enables professional developers to create controlled views of enterprise data for end-user querying. With BIRT Information Object Designer, developers create BIRT Information Objects that pull and integrate real-time data from any number of heterogeneous data sources. With its visual programming environment, BIRT Information Object Designer helps reduce end-user dependence on IT intermediaries while simultaneously ensuring security and control over data access.

Whether the data end users need resides in multiple data warehouses, transactional applications or custom legacy data sources, BIRT Information Objects ensure reporting applications efficiently deliver meaningful information to end users and adhere to corporate data standards.

All BIRT-based products run in the Actuate Rich Information Applications-ready server environment and benefit from its unique progressive design architecture, which empowers every user in the enterprise with access to data presented in an application tailored to their own skill level presented in an interactive, user-friendly interface.

BIRT Information Objects enable developers and IT to consolidate data from virtually any source and present it to users as single objects identified using common business terms.
BIRT Information Objects

Unified Metadata Layer
BIRT Information Objects enable Actuate customers to access and present data to applications and tools, including those in the Actuate Rich Information Applications platform. BIRT Information Objects are “views” consolidated from multiple data sources and described in a plain business language. Users can create, store and reuse queries against BIRT Information Objects as they write reports or create spreadsheets. BIRT Information Objects let IT control how data from various enterprise sources is exposed during query construction, and provide security enforcement across the enterprise.

Protected Information Assets
Information producers can safely access corporate data without writing (or learning) SQL, while IT can be confident in the integrity of the information and the protection of the operational systems from issues such as runaway queries. Actuate customers will appreciate BIRT Information Objects' accessibility not only across reports, but across all Actuate products. Business users seeking to build robust spreadsheets using the BIRT Spreadsheet Designer or those needing answers via ad hoc querying in BIRT Studio will be able to repeatedly utilize the same Information Objects. By reusing BIRT Information Objects, data can be presented in dashboards, web reports and spreadsheets without creating specialized queries for each instance.

Simplified Content Creation and Maintenance
Report creation is dramatically simplified because data access is now separated, centralized and shared across presentation formats. Centralized data maintenance is performed inside the BIRT Information Object layer, without breaking the reports that use it. New data sources can be introduced gradually and changes can be made quickly and transparently, allowing IT to be more responsive to the immediate and changing needs of the enterprise.
BIRT Information Object Designer

BIRT Information Objects are created by mapping data sources into a common XML format that describes the data source, designates and renames fields, defines table joins and articulates data transformations. This XML profile creates a common virtual language in which to combine data from disparate systems.

The BIRT Information Object Designer can create a common corporate data model by defining a traditional "top-down" enterprise model or by taking a more flexible "bottom-up" approach, where tactical Information Objects are developed to solve specific, immediate problems. Further, BIRT Information Objects can be layered, allowing for an ever-evolving enterprise model that synchronizes with the information needs of the business. These iterative approaches allow organizations to realize quick returns without significant up-front costs.

Like traditional report designs, BIRT Information Object designs are published to and managed by the BIRT iServer. This facilitates Information Object reuse across reports, products and projects, which dramatically reduces query construction issues.

In previous versions of Actuate, the cache connection and cache files were created from BIRT iServer. The latest version of Actuate supports the creation of a cache connection and cache files from BIRT Information Object Designer, which also allows users to choose column and table names, and to add indexes to columns in the cache table.

BIRT Information Object Designer’s visual development environment enables developers to quickly create and refine BIRT Information Objects for use across the Actuate platform.
Information Objects on the BIRT iServer

BIRT Information Objects are an integral part of the BIRT iServer and BIRT iServer Express, leveraging existing, robust iServer features such as highly scalable cluster sharing, with high availability; query optimization; distributed query processing; encyclopedia management; security; system monitoring; and administration. From the BIRT iServer, Information Objects are available to all Actuate technologies and external applications.

Cached Information Objects

When creating reports large data sets are often required, and the caching ability of BIRT Information Objects can help manage the trade-off between the timeliness of data, load constraints of operational data stores and response time. When real-time data is not required, the data represented by particular BIRT Information Object views can be stored in the cache database to minimize response time.

IT can ensure that large volumes of report requests are executed against cached data instead of running these queries against production data sources. This protects against performance hits to transactional systems while maintaining real-time responses. Cache population can be scheduled to occur when it is convenient to the operational system, similar to ETL processes. Cached BIRT Information Objects are stored in the organization’s choice of RDBMS, and are administered, scheduled and purged via the Actuate iServer.
Key Features

BIRT iServer integrates information from any data source and application to serve both internal and external users via BIRT Information Objects. iServer, a scalable enterprise server for generating, managing and securely delivering reporting and analytic content to 100 percent of an organization’s users, also provides the industry’s most complete and powerful infrastructure for disseminating interactive, actionable business information to employees, customers and partners.

BIRT Information Objects, available with BIRT iServer Enterprise or BIRT iServer Express, help developers connect users to their data without the irritation of initiating service requests. By providing numerous report design-and-build tools to end users, Actuate streamlines the way data is accessed, enabling every individual to tap into the data they need and to generate reports in the format they choose. BIRT Information Objects contribute to this scenario by providing easy access to complicated data sources.

Controls Enterprise Data Access
- Flexible, pre-defined data sets
- Explicit query definitions
- Role-based access control

Offers Flexibility and Power While Meeting Business Demands
- Data access flexibility
- Support for multiple data sources
- Visual development environment available as an independent design tool or as a built-in perspective in BIRT Designer Pro
- Boosts developer productivity
- Embedded graphing
- Object-oriented architecture

Cuts Costs While Meeting User Needs
- Graphical design tool for IT
- Web-based interface for end users
- Simplified field names
- BIRT Information Object catalogs
- Output format flexibility

Unifies Data Access
- Reusable BIRT Information Objects
- Centralized query management
- Layered, easy-to-change views
- Secure access to all data sources

Provides Real-Time Information to Consumers and Users
- Uses simple, business-relevant terms
- Empowers information producers
- Delivers timely, pertinent information

BIRT Information Objects are comprised of data adapters/integrators that provide data access, data transformation, and information access in a form that hides data complexity behind a user-friendly interface employing standard business terminology.
Key Benefits

Information Objects and EII for Enterprise Reporting

BIRT Information Objects deliver the benefits of traditional metadata layers—such as separating query composition from report construction, business-friendly data access and object reuse across reports—and also provide access across reporting products, such as e.Report Designer Professional, BIRT Spreadsheet and BIRT Studio. EII adds additional benefits, including access to information in disparate data sources in real time. This allows organizations to combine data warehouse trend information with today’s operational statistics in order to quickly assess real-time business performance.

BIRT Information Objects offer the following benefits:

Common metadata layer
- Describes all enterprise data sources
- Hides data complexity
- Provides common metadata layer for all products

Common data access and integration layer
- Integrates and provides access to any enterprise data source
- Taps key data in real time
- Complements existing data warehousing solutions

Reusability
- Supports skill set partitioning, re-use and incremental development
- Isolates data from formatting and provides abstraction layer
The Progressive Design Architecture

BIRT Information Objects are an integral member of Actuate's progressive design architecture, which brings the principles of open source to reporting applications and encourages participation, iterative development and modularity, driving casual user self-service in collaborative reporting.

The entire progressive design architecture includes:

- **BIRT 360**: Operational and analytic user-created dashboards for a 360-degree view of the business in a true self-service environment.
- **BIRT Data Analyzer**: In-memory analytics application that helps business users uncover trends, identify anomalies and model scenarios.
- **BIRT Reports**: Web reports based on open-source BIRT technology from the Eclipse project, available without charge from BIRT Exchange.
- **BIRT Studio**: Self-service, ad-hoc web report development within IT control
- **BIRT Interactive Viewer**: End user report viewing and customization
- **BIRT Mobile Viewers**: Allow users to mobilize and carry corporate information wherever they go.
- **BIRT iServer**: Enables the use of BIRT Information Objects, and includes scheduling, versioning, and archiving functions, allowing users to run both on-demand and scheduled reports without IT intervention but within IT-control. This highly scalable implementation of Actuate services provides multi-server, multi-project support; high-availability clustering, failover and load balancing; metadata caching; and enterprise management and tuning features
- **BIRT onDemand**: Actuate's Platform as a Service (PaaS) offering, which enables any user, anywhere, to access enterprise information via the Web, without downloading/installing Actuate BIRT desktop products.

These options provide an array of choices from which to create unique information applications that appeal to any user.

Within the progressive design architecture structure, BIRT designs can be shared among highly skilled developers, business users and consumers. This encourages participation and supports an iterative development environment, which speeds development and adoption of information applications.
Deployment Options

Progressive design architecture can be deployed and configured to address the needs of almost any type of reporting project in any business environment:

- **Embedded Java Reporting Kit:** BIRT, BIRT Interactive Viewer and BIRT Studio can be seamlessly embedded within larger Java applications to provide advanced reporting, printing and formatting features. This option is available to Actuate ISVs and OEMs only.
- **BIRT iServer Enterprise Deployments:** BIRT iServer provides high-scale performance, reliability and security, and supplies BIRT Information Object metadata and multi-server and multi-project capabilities to enterprise collaborative reporting projects.

Within the progressive design architecture structure, BIRT report designs can be shared among highly skilled report developers, business users and consumers. This encourages participation and enables an iterative report development environment, which speeds development and adoption of the information application.

System Requirements

System requirements vary with options chosen. For a system analysis based on your specific needs, please contact an Actuate expert at 1-800-914-2259 (US & Canada) or contact us by email. You can also contact one of our offices worldwide.

For More Information

To get more information about interactive web reporting or for answers to any of your questions, please contact an Actuate expert at 1-800-914-2259 (US & Canada) or contact us by email. You can also contact one of our offices worldwide.

ActuateOne is recognition of a single, common architecture for development and deployment that meets the dynamically changing needs of information consumers.