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# Crystal Reports XI

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- ▶ *Powerful Report Design Made Easy*

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## Executive Summary

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- ▶ Your sales management team wants to update their world-wide sales forecasts to present at the quarterly board meeting. Unfortunately, all order and sales data is stored in separate databases around the world. Since you can't access all of the data sources in one report, you need to create multiple reports. But these are hard to compare and the sales management team ends up presenting revised sales forecasts that are not accurate.
- ▶ You have been asked to provide information for an important presentation to a potential new client. There are several other companies vying for their business, and you need to dazzle them with professional-looking reports. However, you can only run reports with raw data that is not properly formatted with maps, charts, and images. Even though it was close in the end, you lose the contract to another company who presented their information with professional-looking reports.
- ▶ You spend most of your time creating financial reports for the finance team. As their needs for corporate financial information evolve, they contact you to update and revise their reports, as they cannot modify the reports themselves. Since you have a backlog of reporting projects that you are working on, you often cannot get to their updates right away. This frequently leaves the finance team with reports that do not include up-to-date information, or are not formatted exactly how they would like them to be.

Do these scenarios sound all too familiar? Can you access all of your data sources with a single reporting tool? Do you create professional-looking reports that meet the information needs of your end users? Do you waste precious time customizing and maintaining reports to address your company's changing business needs?

Crystal Reports®—a proven, world-standard solution—allows you to design flexible, feature-rich reports from your relational, OLAP, XML, or custom data sources. With more than 100 formatting options, Crystal Reports delivers complete control over data access and presentation. End users can drill down into reports, sort/filter information, refresh reports, print reports, and even modify reports to get to the information they need. And you can export reports into many formats including PDF, Excel, and Word, so your end users can work in familiar formats and environments. Now with the introduction of dynamic and cascading parameters and other productivity features in Crystal Reports XI, Crystal Reports can help you speed report production and reduce redundant report maintenance so you can focus on other critical tasks.

# Getting Started with Report Design

Creating a Crystal report is easy. Before getting started, you need to understand the purpose of your report, what data you need to access, and how you would like to lay the report out. A start page is also included with Crystal Reports to maximize your report design experience.

## Deciding on Your Report Purpose

The key to any report is to understand its purpose. A report takes raw data and turns it into information which your end users can use to make effective business decisions. You need to understand why you are creating this report, and what business decisions will be derived from it. It is also important to find out who will be reading the report and interpreting the data. The report must provide the information your end users are looking for.

## Finding the Data

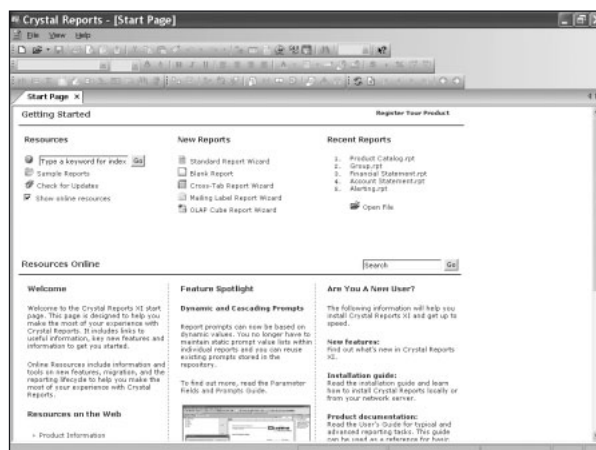
You will need to know what data source you need to report from to find the information your end users need. If you do not know, you can contact your database administrator. Your database administrator can also help you get familiar with the data. The body of your report should include all of the data your end users need, and fulfill the purpose of your report. With Crystal Reports, you have lots of flexibility for accessing your enterprise data because it lets you report off one unique data source, or combine data from several different data sources.

## Creating the Layout

Your report will need to include all of the required information in an easy-to-read and easy-to-understand format. This will include titles, headers and footers, and body content. You will also need to think about graphical elements like charts and maps and think about how you would like your end users to navigate the content. Plan how you want your report to look in advance, so that you can easily manipulate the layout to suit your needs.

## Start Page

Designing reports is easier when you use the start page included in every edition of Crystal Reports. This page appears each time you open the product and includes useful tip and tricks, on-line resources, and information on new features. Its main objective is to provide you with up-to-date information so that you can get the most out of Crystal Reports and get your job done.



*Find useful content on important resources and new features in the Crystal Reports start page.*

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## Extensive Data Access

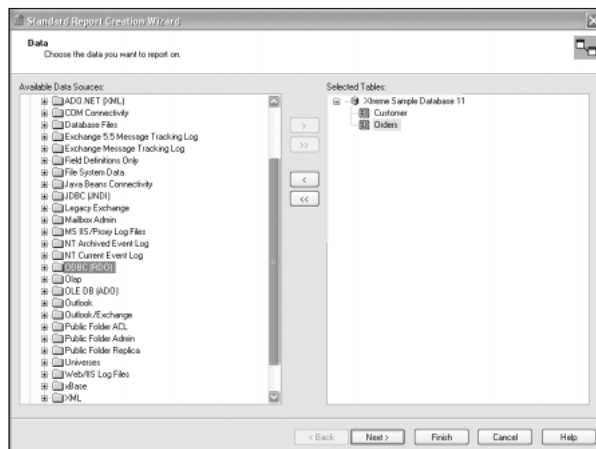
Accessing and combining data from multiple sources is often complex and requires multiple tools. With powerful data drivers and flexible ways to access data using Crystal Reports, you can connect to the data you need.

### Access to Any Data Source

You can easily connect to your enterprise data and satisfy end-user information requests with broad data access capabilities from Crystal Reports. Whether you require native, ODBC, OLE DB, or JDBC connectivity to databases, files, logs, enterprise applications, or program elements, Crystal Reports is the only tool you need. More than 35 data drivers are included for direct, code-free access to virtually any relational, OLAP, XML, or in-memory data. Crystal Reports XML, JDBC, IBM DB2, and Exchange data drivers have also been updated in Crystal Reports XI to give you even more data access options. Plus, presenting data from multiple sources and in multiple languages within the same report is easy with Crystal Reports.

### Control Over Data Access

Crystal Reports gives you flexible and unconstrained control over data connectivity so you can easily satisfy end-user information requirements. Choose to write your own SQL commands or use the Crystal Reports powerful query generation capabilities for complete control over how the data is queried. Plus, business views eliminate the hassles associated with manually moving reports from development to production.



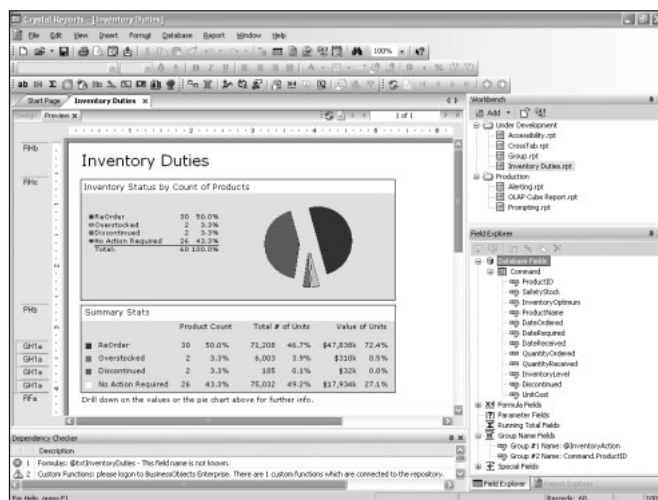
*Access virtually any data with native, ODBC, OLE DB, and JDBC connectivity to relational, OLAP, XML, legacy, and enterprise data sources, including Oracle, IBM DB2, Sybase, Microsoft SQL Server, and Informix.*

# Powerful Report Design

Crystal Reports makes designing reports fast and easy. Its open design environment offers a high degree of flexibility and control so you can create highly formatted, feature-rich reports that meet the information needs of your end users.

## Visual Design Environment

You can quickly design interactive reports using an intuitive, drag-and-drop interface and object-oriented explorers. Use optional experts and wizards to simplify common reporting tasks such as connecting to a data source, selecting, grouping, sorting, and summarizing data. Novice users can design and apply customized templates that specify standards in formatting and logic—including data access operations—to ensure design consistency across reports. You can even use existing reports as templates.



*The updated visual report designer allows you to point and click so you can create reports without the need for intensive coding.*

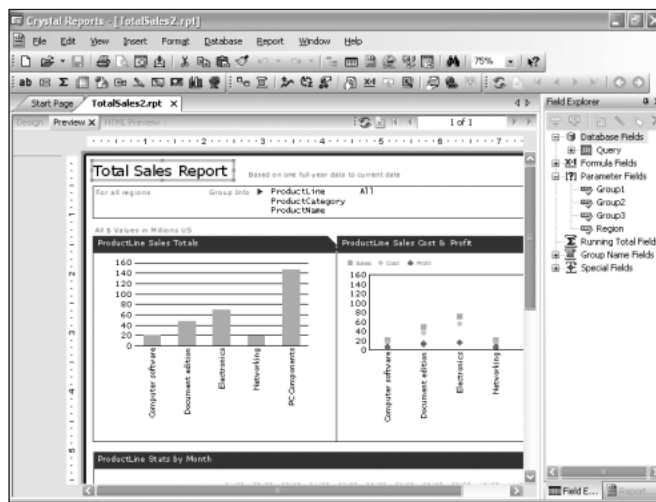
## Powerful Formula Language

The extensive formula language of Crystal Reports includes over 160 built-in and user-defined functions and operators to tightly control report formatting, complex logic, and data selection. It includes a codeless wizard, call stack, and auto complete for faster creation of any formula. You can eliminate redundant formula creation using custom functions—procedures that allow you to share and reuse formula logic across reports. You can also create valuable summary data that might not be available in your database.

## Rich Data Presentation

Create virtually any report you need including cross-tab, conditional, top N/bottom N, summary/drill-down, form, mailing label, OLAP, and sub-report that meet the business needs of your users. Crystal Reports includes a complete set of layout and design controls to help you give your reports a professional, pixel-perfect appearance—without custom coding. Streamline the number of required reports by using parameters. Organize the data in a logical manner using grouping and sorting. Increase the graphical impact of your reports by choosing from a wide variety of map and chart types, including bar/3D bar, pie/doughnut, line, gantt, gauge, funnel,

XY scatter, ranged map, dot density map, and more. New in Crystal Reports XI, Crystal Reports will select the best chart style based upon the data in your report. Chart design is faster and easier because charts will be automatically updated when new variables are added. Now you can also create their reports in a hierarchical rather than just a relational manner. This provides a better fit for organizational charts and summary reports.



*Choose from a complete set of design controls to make pixel-perfect reports.*

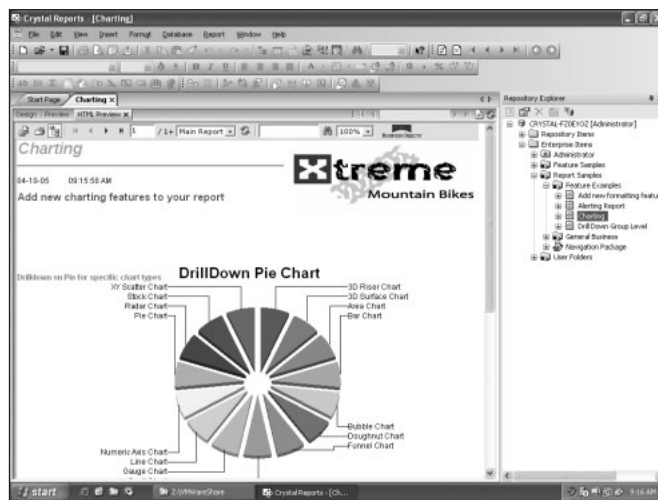


# Improved Productivity

Crystal Reports can help you speed report production and reduce redundant report maintenance so you can spend more time on other critical tasks.

## Speed Report Production

Expedite the report design process by storing key report objects—including text objects, SQL commands, bitmaps, and custom functions (formulas)—in a central managed library for sharing, reuse, and single-point updating across multiple reports. Crystal Reports also helps ensure that the reports you create render precisely in a web environment or exported format. For example, you can create reports and preview them at design time. You can also save recommended export options with your report to ensure optimal output. Plus, and this is new in Crystal Reports XI, you can preview your work in HTML before publishing to the web.

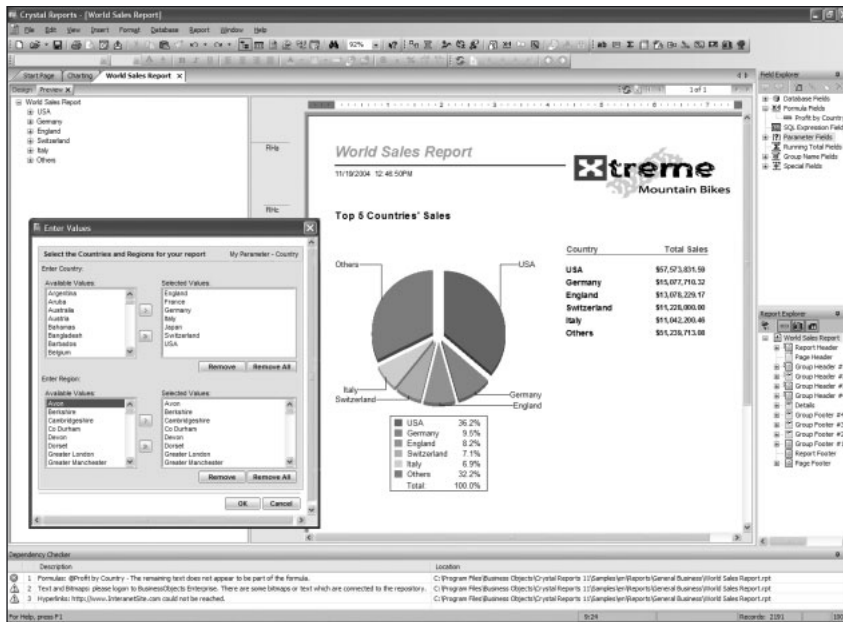


*With the HTML preview, you can publish perfect reports by previewing how reports will look before they are published to the web.*

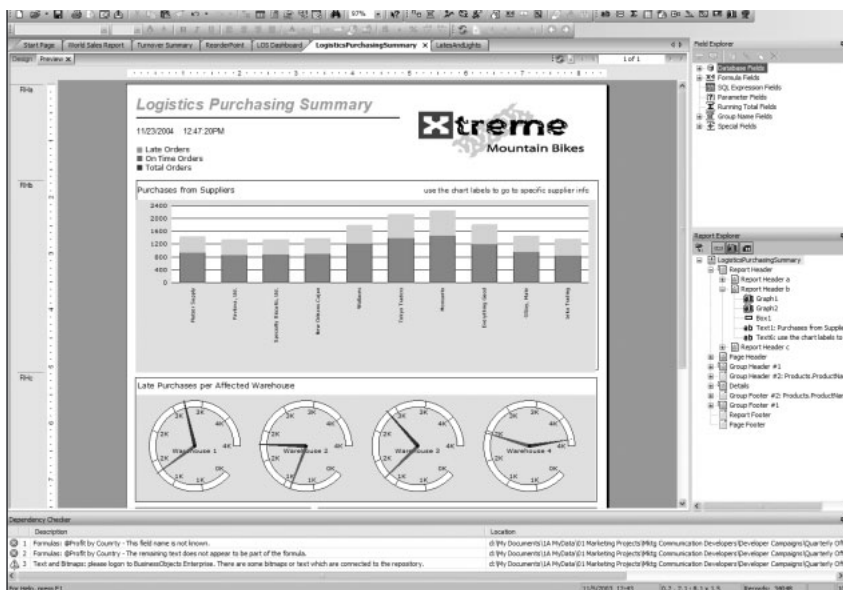
## Reduce Report Maintenance

With the introduction of dynamic and cascading prompts in Crystal Reports XI, it's now even easier for you to address a variety of end-user needs with a single report, while reducing report maintenance hassles. As your database content changes, parameters will automatically reflect the latest information so end users can create an up-to-date, individual view of the data in a report. The workbench helps keep projects organized by grouping reports according to preference.

For application developers, Crystal Reports helps minimize presentation layer maintenance requirements which result from ever changing end-user specifications. It supports the separation of data access and report design from business logic so that you can easily add new reports or modify existing reports to your applications without impact to core business logic. Java and .NET developers can also take advantage of data binding, using unbound fields in the Crystal Reports designer and binding application to these fields at runtime. And the new dependency checker in Crystal Reports XI will automatically identify broken links, formula errors, and dependency issues. This can significantly reduce your time spent on quality assurance.



Base report prompts on dynamic values with dynamic and cascading prompts. You will no longer need to maintain static prompt value lists within individual reports because you can reuse existing prompts stored in the repository.



Use the dependency checker to instantly find broken links, formula errors, and dependency issues before reports are published and distributed.

# End-User Interactivity

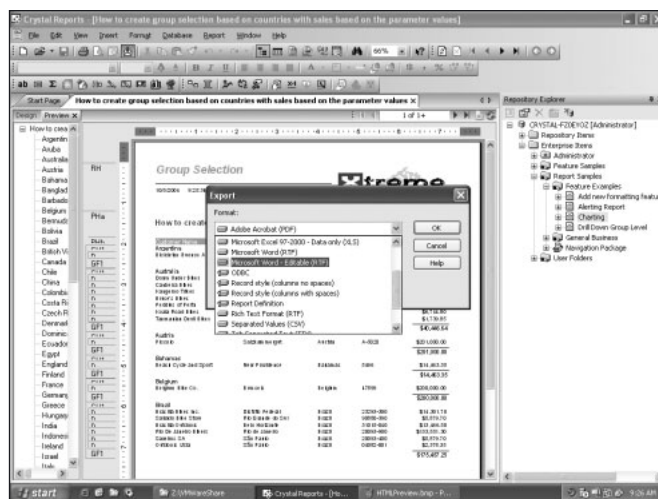
Crystal Reports gives you the ability to build end-user interactivity into your reports. Let your end users refine their own reports without requesting assistance from IT.

## Report Viewing

With Crystal Reports, you can reduce end-user reliance on IT while driving better decision-making. Crystal Reports allows your end users to interact with and view data in familiar formats and environments. Deploy out-of-the-box or choose to customize any of the Crystal Reports thin- and zero-client viewers to give end users report printing, exporting, refreshing, and searching capabilities right at their fingertips. Plus, drill-down on charts or between groups of data can be automatically implemented with any report without extra coding. End users can also select predefined parameters in a single report to receive a subset of customized data.

## Report Interactivity

Crystal Reports supports a variety of industry-standard export formats including Excel, Word, and PDF. And new RTF exporting empowers end users to easily enhance and expand a report in a familiar word processing environment. For mobile users, an offline report viewer is also included so information can be viewed without requiring connectivity to your network.



*Use the editable RTF export for report export editing and optimized accuracy and forms processing. The end user is now able to enhance and expand a report in standard word processing applications.*

## Report Navigation

Crystal Reports includes alerting capabilities, making it easy to highlight when certain data conditions or threshold levels have been breached. You can also set up links between reports and other objects to help guide end users through related information—no custom coding required. For example, link from a turnover summary report to a detailed turnover report and include a hyperlink to the human resources module in your enterprise resource planning (ERP) system. With guided navigation, you can define specific navigation paths between report objects within the same or different reports for easier end-user navigation.

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## Report Delivery

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Once you've created reports, you need to deliver them to your end users. Crystal Reports now offers a scalable web reporting solution that makes it easy and efficient for you to deliver reports to users. The Report Publishing Wizard can upload any existing Crystal reports to the web, while setting report scheduling and security options at the same time. Then you can provide your end users with a single URL for instant and secure access to a customizable portal for report viewing and interaction. Prebuilt portal integration kits are also available to help expedite customization into your existing portal interface.

### **Security**

You can take advantage of granular object, user, and data-level security. And you can specify user access down to which information and what actions each user can perform within a particular report.

### **Flexible Scheduling Capabilities**

Crystal Reports Server XI includes flexible scheduling capabilities to ensure that information can be processed efficiently when and where you need it. Schedule reports based on events—such as a data warehouse update—or specific business calendars that reflect your company's financial calendar. You can also grant end users the right to schedule reports at specific times such as nth day of the month or every Monday, in specific formats such as PDF and Excel, and to specific printers. Related reports can also be packaged together for simultaneous processing.

### **Scalable Central Architecture**

To support high volume reporting, Crystal Reports Server uses a scalable central architecture, comprised of a set of report processing services for speed-of-thought information access. Innovative page-on-demand technology helps expedite processing by only serving up requested pages to end users and by presenting data, then images for the requested page. On-demand caching helps maintain fast performance levels by reusing common content requests to service multiple users.

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## Choose the Right Edition for Your Needs

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Crystal Reports is available in four editions to meet your report design needs. Editions are available should you need to design reports from your PC-based data sources and/or enterprise data sources, design reports and integrate them into applications, or design reports and deliver them over the web.

### **Crystal Reports Server**

New Crystal Reports Server XI provides small and medium-sized organizations with a complete reporting solution for creating, managing, and delivering reports over the web. It addresses all steps in the reporting process—from data access and report design, to report management and delivery, to report integration with portals and applications. Plus, it includes Crystal Reports XI, the world standard for report creation, making it easy for existing or new Crystal reports to be shared over the web. One year of technical support and maintenance is also included for rapid deployment and peace of mind.

### **Crystal Reports Developer Edition**

Designed for easily integrating report viewing, printing, and exporting capabilities into applications, the Developer Edition provides report creation and integration tools for presenting data within applications.

### **Crystal Reports Professional Edition**

Designed for the creation and maintenance of highly formatted reports, the Professional Edition includes all features in the Standard edition plus access to almost any enterprise data sources.

### **Crystal Reports Standard Edition**

Crystal Reports Standard Edition is available for creating reports from PC-based data sources.

## Key Features by Edition

The following table provides an overview of the key features differences by edition, for Crystal Reports XI:

Crystal Reports Key Features by Edition	Crystal Reports Professional	Crystal Reports Developer	Crystal Reports Server
Data Access and Report Design			
Native, ODBC, OLE DB, and JDBC connectivity to relational, OLAP, XML, legacy, and enterprise data sources	✓	✓	✓
Custom, user-defined data through JavaBeans, ADO.NET, and COM data providers		✓	✓
Visual report designer for rapid data access and formatting	✓	✓	✓
Report Integration			
Extensive SDKs for report viewing, printing, and exporting in applications		✓	✓
Report processing resides within a custom application		✓	✓
Offloaded report processing on a separate report server			✓
Report creating APIs for end-user report modification and creation <sup>1</sup>		✓	✓
Customizable report viewers		✓	✓
Delivery and Management <sup>2</sup>			
Rapid web report publishing for workgroups and departments			✓
Scheduling capabilities based on events, calendars, or specific points in time			✓
User, group, object, and folder security			✓
Powerful semantic layer (business views) for end-user view of database			✓
Repository for reusing common report objects across multiple reports			✓

<sup>1</sup>For Report Designer Component users, these APIs are available in the Developer Edition

<sup>2</sup> Professional and Developer editions include a special five-named user introductory offer of Crystal Reports Server

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## Conclusion

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- ▶ Your sales management team wants to update their world-wide sales forecasts to present at the quarterly board meeting. Because Crystal Reports allows you to access and combine data from multiple sources into one report, you are able to send them a report consolidated with all of the information they need to accurately update their sales forecasts. The presentation is well received at the quarterly board meeting, and everyone wants to know who created the reports.
- ▶ You have been asked to provide information for an important presentation to a potential new client. By using the powerful report design functionality of Crystal Reports, you dazzle everyone with professional-looking reports that include maps, charts, and images. The client signs the contract at the end of the meeting, and it's all because of your reports.
- ▶ You spend most of your time creating financial reports for the finance team. Now you can focus on creating the great financial reports they need, without being sidetracked by modifying existing reports. Since Crystal Reports allows you to build end-user interactivity into your reports, the finance team can refine their own reports without requesting any of your assistance.

A world standard for enterprise reporting, Crystal Reports is an intuitive reporting solution that helps you rapidly create professional-looking reports from your enterprise data sources, so your end users can make effective business decisions. Extensive formatting options deliver complete control over how the data is presented to end users, and your end users can refine their reports to meet their changing business needs. Crystal Reports is available in different editions to meet all of your report design requirements.

Crystal Reports is the world standard for reporting. Billions of Crystal reports (.RPT) are used across the world to empower end users to make decisions. More than 500 major independent software vendors include Crystal Reports as their reporting standard, and it is embedded within leading enterprise application software from partners like Microsoft, SAP, Borland, BEA, and IBM. To learn more about Crystal Reports or the BusinessObjects XI suite, visit our website at [www.businessobjects.com](http://www.businessobjects.com).



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