

**DB2** Data Management Software

## Crystal Decisions provides sharper business intelligence with DB2 Relational Connect.

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### Overview

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■ **Application**

*Federated querying of disparate databases for Crystal Decisions business intelligence solutions*

■ **Business Benefits**

*Substantial reduction in amount of time needed to complete federated queries; ability to perform queries that were previously impractical; avoidance of expense required to migrate heterogeneous databases to common database platform; savings in database administrator time from ability to code in a single language*

■ **Software**

*IBM DB2® Universal Database™;  
IBM DB2 Relational Connect*



*Crystal Decisions has been specializing in reporting, analysis and information delivery products for more than 15 years and has shipped more than 12 million licenses.*

Questions are the lifeblood of a healthy company because they lead to discovery, insight and action. Crucial to this process are reports, especially easy-to-digest reports that reveal business operations and results in their totality. Many companies, however, struggle with developing meaningful reports. Often, data is stored in separate silos throughout the organization and existing reporting tools are either unable to amalgamate data from these multiple sources or are slow and cumbersome.

*“DB2 Relational Connect provides Crystal Reports with exceptionally fast and efficient federated querying capability.”*

*– Trevor Smith, Program Manager,  
Business Development Group,  
Crystal Decisions*



*For companies that rely on their data for day-to-day decision-making, the Crystal Decisions and DB2 solution can result in reduced costs and increased productivity.*

IBM and IBM Business Partner Crystal Decisions have teamed up to help solve this problem. Crystal Decisions is an information management company that leads the market in reporting, analysis and information delivery solutions and services. Headquartered in Palo Alto, California, with over 1,600 employees in more than 20 offices worldwide, Crystal Decisions posted revenues of US\$217 million for Fiscal Year 2002.

Crystal Enterprise™, Crystal Reports® and Crystal Analysis™ are the company's flagship business intelligence products, designed for companies requiring in-depth reporting enterprisewide. Used with relational database management systems (RDBMSs), Crystal Decisions software provides a standardized, Web-based information infrastructure to help companies access their disparate data sources, such as enterprise resource planning (ERP) and customer relationship management (CRM) systems. With this infrastructure, companies can distribute secure, interactive reports and analysis to their employees, customers and partners.

Accessing disparate data sources—and providing a total view of the enterprise when answering questions—are integral Crystal Decisions functions. But joining the data from different data locations in a client tool, as opposed to using a server solution, is not always the most efficient method. Recently, Crystal Decisions found a server-based solution when IBM completed a proof of concept using Crystal Reports with IBM DB2 Universal Database and IBM DB2 Relational Connect. DB2 Relational Connect enables DB2 Universal Database to access data in Oracle and Sybase databases as well as Microsoft SQL Server and IBM Informix® Dynamic Server.

Crystal Decisions' testing revealed that DB2 Relational Connect was able to reduce the time it takes to generate a report using Crystal Reports Version 9, Oracle 8 and DB2 Universal Database, Version 7.2. In one example, time to generate a report on 10,000 records was reduced from 85 seconds to only 1.4 seconds. For a complex report utilizing many queries, processing time is significantly reduced.

*“Users of Crystal Reports and Crystal Enterprise, with DB2 Universal Database and DB2 Relational Connect, can provide coherent reporting across thousands of data sources and large amounts of data, and discover new ways to meet the information needs of their organizations.”*

*– Janet Wood, Vice President of Business Development, Crystal Decisions*

"DB2 Relational Connect provides Crystal Reports with exceptionally fast and efficient federated querying capabilities," comments Trevor Smith, program manager, business development group, Crystal Decisions. "For companies using DB2 Universal Database and DB2 Relational Connect with Crystal Reports, this means that queries that were previously not viable can now be performed quickly. It also means that there's no need to migrate data on disparate databases in order to have a total view of the enterprise."

### **Opening a world of profitable possibilities**

According to Smith, the addition of DB2 Universal Database and DB2 Relational Connect to Crystal Decisions' business intelligence solution makes a big difference in helping companies to leverage and profit from the infrastructure they already have. Being able to mask the differences between relational databases solves one of the key problems that many organizations face.

Consider, for example, an HR department that has personnel data stored across multiple data sources, all uncoordinated. The result is overlap, duplication and confusion. The beauty of Crystal Reports with DB2 Universal Database and DB2 Relational Connect is that it seamlessly integrates all the disparate data sources, allowing the HR department to create a 360-degree view of employee data.



*DB2 Relational Connect allows DB2 Universal Database to perform federated queries against heterogeneous databases at a fraction of the time required previously—greatly speeding up the flow of information for enterprise data users.*

Another example occurs as a result of mergers and takeovers. When companies merge, business analysts often are blocked from viewing the greater whole because vital data resides on disparate databases that do not talk to each other. Using a Crystal Decisions business intelligence solution with DB2 software, the newly merged companies can provide reports on customer demographics enterprisewide without migrating data or standardizing databases. So, rather than undertaking the expensive process of migrating data to a common database, using DB2 Relational Connect enables companies to take advantage of their existing database investments for a longer period of time.

Database administrators and programmers benefit as well, and can focus their attention on high-priority tasks because the federated DB2 database frees them from having to know multiple database dialects. "Administrators and programmers can code in a single language, and administrators need not be affected when data is migrated from one database to another," Smith says. "DB2 Relational Connect enables you to look at a world of heterogeneous databases as if it were a collection of DB2 tables."

### Querying unstructured data

The robust server-side technology of DB2 Universal Database works with all major hardware platforms to minimize query time regardless of the data source. In addition, companies can include data from non-traditional, distributed data sources by using the federated capabilities of the IBM database in conjunction with DB2 Relational Connect, Crystal Decisions reporting tools and other IBM software products. Such sources include Web services and XML documentation.

For example, the same financial company could access stock quotes through Web services, pending stock orders through IBM WebSphere® MQ and stock research and recommendations using an XML document.

### Powerful DB2 technology

To leverage DB2 Relational Connect with Crystal Reports, the customer configures the connections to the distributed systems and defines nicknames by which the distributed data, including join views over heterogeneous sources, will be known to the application. These nicknames appear to the Crystal Reports developer as standard DB2 tables and columns, making the distributed nature of the query transparent to the developer.

DB2 Relational Connect is part of IBM's portfolio of information integration technology, which includes such products as IBM Life Sciences Data Connect, IBM DB2 DataJoiner®, IBM DB2 DataPropagator™ and IBM Enterprise Information Portal. Information integration enables integration of diverse forms of business information across and beyond the enterprise.

"For the users of Crystal Reports and Crystal Enterprise, with DB2 Universal Database and DB2 Relational Connect, the potential benefits are enormous," says Janet Wood, vice president of business development, Crystal Decisions. "Users can provide coherent reporting across thousands of data sources and large amounts of data, and discover new ways to meet the information needs of their organizations. The more information business analysts can incorporate into their views of their company's activities, the more effectively they can steer their companies in the direction of higher profits."

### For more information

Please contact your IBM marketing representative, IBM Business Partner or IBM Direct at: 1 800 IBM-CALL.

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For more information about Crystal Decisions, visit:  
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