Introducing the Discoverer "Drake" Release: Personalized Dashboards Supporting OLAP and Relational Access

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Introducing the Discoverer "Drake" Release: Supporting Personalized Dashboards

EXECUTIVE OVERVIEW

In the Information Age, corporations have at their disposal massive amounts of data collected in transactional systems. These systems are designed for the efficient selection, storage, and retrieval of data, and are essential for businesses to keep track of their affairs.

However, having data is not the same as having information. The challenge is in deriving answers to business questions from the available data. This wealth of data can yield critical information about a business, so that decision makers at all levels can respond quickly to changes in the business climate.

This translation from data to information usually requires businesses to implement a vast array of products to manage the different data sources (OLAP, relational, statistical and data mining) and the different presentation styles (executive briefings, KPI cockpits, campaign analysis, sales analysis etc). Each of these products requires users to learn different interfaces and terminology, which significantly increases the costs of implementing a complete solution. To manage these competing interfaces many businesses use corporate portals to act as a glue across their many disparate products. This glue only works at a very superficial level and leaves many business and infrastructure critical issues unresolved.

The Oracle 10g Business Intelligence solution enables you to shape both long-term goals and day-to-day decisions, providing you with time-critical, relevant, and accurate information. Oracle not only offers a complete and integrated platform for business intelligence, but also offers solution choices designed to meet the varying requirements of analysts and decision makers at every level within your business. Oracle Business Intelligence is delivered using consistent user interfaces across all data sources (relational, OLAP, statistical and data) and all reporting styles (executive briefings, KPI cockpits, campaign analysis, sales analysis etc). Most importantly all of the safety, security, manageability, and scalability of Oracle Database applies to your Oracle Business Intelligence solution. Moreover, technical staff can use the same database management tools to allocate resources, monitor performance, and so forth, of the OracleBI environment. So additional training is minimized. Oracle Business Intelligence 10g can provide a significant edge in an increasingly competitive marketplace.

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BUSINESS INTELLIGENCE

Figure 1 Sample Executive Information Portal

INTRODUCTION

All of the data for Oracle Business Intelligence is stored in an Oracle Database as a single source of truth. Oracle's gold-standard 10g database engine provides the ability to perform multidimensional, relational and data mining operations all within the same integrated engine. Businesses are no longer forced to distribute their OLAP, relational, statistical and data mining results via hundreds of spreadsheets, or continually ship data to separate multidimensional or data mining databases.

Only Oracle offers a complete and integrated platform for business intelligence that also offers a solution that provides choices at different levels of sophistication so that businesses can tailor their installation to meet the unique their requirements. In addition, the Oracle Business Intelligence solution offerings have been designed to provide a consistent and user-friendly experience for ad hoc querying, reporting, and collaboration.

This paper will explain how to use the Oracle BI10g Solution to create an enterprise information portal that integrates both OLAP and relational data. It will also highlight many of the key benefits of using the Oracle BI10g Solution

BUILDING A BI DASHBOARD

Oracle's business intelligence solution provides users with the ability to move beyond the typical transactional analysis of "*how much did I sell yesterday*" to more advanced analytic analysis asking questions such as '*how much will we sell tomorrow*" and "*which types of customers are most likely to respond to our next marketing campaign*".

Answers to these types of questions also need to be analyzed in the context of other business questions and not analyzed in isolation. Many businesses are looking for easy ways to coordinate analytic reports within an enterprise information portal (EIP) framework. Within this type framework users need to able to directly manage the both the content and structure of their portal pages adding layers of personalization to fine-tune their business queries.

This section explains how Oracle Discoverer "Drake" provides the perfect environment for building and manages EIPs, as shown in *Figure 1*. Discoverer Drake resolves the all key issues commonly associated with BI portals and EIP. The Drake release of Discoverer provides a number of unique benefits to business users. It allows them to:

- Quickly create and manager their own portal pages
- Easily personalize their portal reports
- Control how reports are visualized
- Drill from aggregate information to detailed transactional data
- Transparently manage application security
- Seamlessly integrate with corporate security features like single sign-on

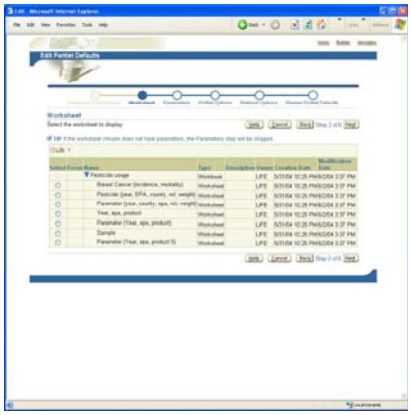


Figure 2 DiscovererPortlet Wizard

Figure 3 DiscovererPortlet Provider Features

Figure 4 Discoverer GaugePortlet Provider

Empowering Business Users

Discoverer "Drake" Portlet Providers and Oracle Portal allow business users to interactively turn data into trend reports and share them with other analysts and managers, providing insight into the metrics that spawn good business decisions.

Oracle Portal combined with Discoverer "Drake" Portlet Providers allows business users to directly manage their own portal content. They allow Discoverer worksheets to be embedded directly within a portal page, where each portlet can display a worksheet consisting of either a table or crosstab with or without a linked graph.

Oracle Portal's unique development wizards help guide users through the process of adding a worksheet to a portal page. The wizard, see *Figure 2,* consists of six basic steps that help define the following:

- Selection of the required end user layer (EUL)
- Selection of the required worksheet
- Default parameter values for the selected report
- Presentation options –
  - Table or crosstab with or without associated graph
  - Gauge
- Portlet options such as title, text area and analyze options
- Refresh options such as refresh frequency

Once the wizard has been completed the report is displayed directly in the portal page with information about the refresh details and an 'Analyze' link, see *Figure 3,* that provides direct access to the live data using Discoverer Viewer.

The Drake release of Discoverer allows users to transform worksheet rows and columns within a report into a single or series gauges. Gauges are ideal for managing key performance indicator (KPI) style reporting. KPIs provide a high level snapshot of a business based on specific predefined measures. This may include for example global or regional sales figures and trends over time. Gauges are critical to executive portals. They can give a business executive a high-level, real-time view of the heath of a company by visually displaying vital statistical information about the company at a glance.

The Discoverer Gauge Portlet allows users to quickly and easily create business intelligence KPI style dashboards using the same reporting interfaces used to view their OLAP and relational data sources, see *Figure 4.*

Discoverer Drake is the only BI product to provide one single interface to manage all business intelligence reporting requirements, allowing business users to get a true picture of how well their business is doing and where performance can be

improved. Better business decisions become the standard as analytic capabilities unfold with a simple click on the page

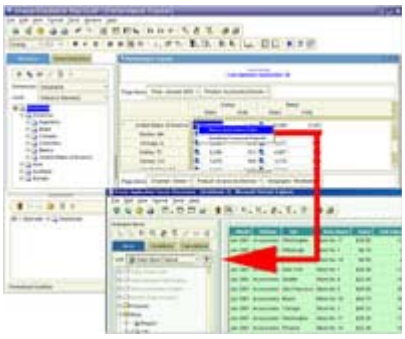


Figure 5. Seamlessly Drilling from summary informaiton to detailed data

Seamless Data Integration

The 10g database provides a powerful integrated storage repository combining all key types of business data – transactional, multidimensional, statistical and data mining. Discoverer Drake is the first reporting product to take advantage of all this integration. For example, a worksheet that shows high-level aggregate multidimensional data can be further enhanced using the new powerful drilling capabilities. This allows drilling from aggregate data directly to detailed transactional data or to any other level within a related worksheet. All this can be defined by users and does not require special program code or intervention by the IT department.

As users drill through the layers within their reports, see *Figure 5*, the same user interface is maintained, which allows users to focus on the analysis opportunities and not the task of mastering the different and competing complexities of varying products.

Single User Interface

Ease of use is one of the most important considerations when selecting a BI solution tool. Any user at any level in an organization should be able to use an end user reporting tool with a minimal amount of training. The tool should have sufficiently rich functionality, yet be simple enough for even the novice user.

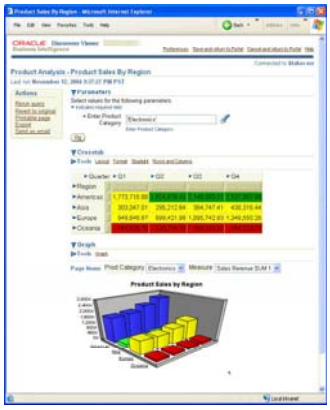


Figure 6 DiscovererViewer – Single window into many worlds

Discoverer's unique interface meets these requirements and enables users to interact directly with data using business terminology that is familiar. Each Discoverer component maintains a consistent and common feel throughout the reporting system

Unlike many business intelligence products, Discoverer provides one consistent interface for ad hoc querying, reporting and drill down/pivot functionality. Users resize dialog boxes, select and drag multiple items or activate menu options from a toolbar with a single click. The result is the maximum in flexibility, as you can develop once, deploy anywhere: Discoverer Viewer, Discoverer Plus and Oracle Portal. For pure HTML client for viewing and analysis Discoverer Viewer is a zero download, pure HTML client for viewing and analyzing all reports for both pure relational and OLAP data sources, see *Figure 6*.

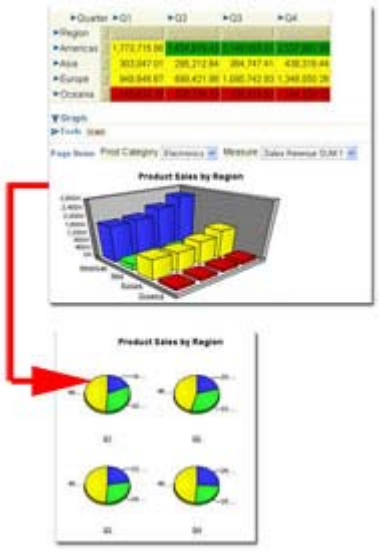
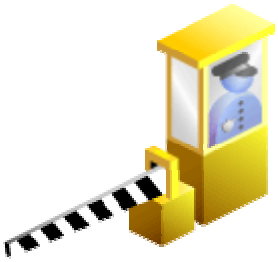


Figure 7 Personalization of reports

Easy Personalization

Defining a view of specific measure such as sales is sometimes based on personal preferences. Some users like to view data as bar charts whilst others prefer line charts. Users want to personalize their portal content to allow them to analyze their data based on their preferred style of working. This can create a serious problem where users copy reports just to change the traffic light colors on a crosstab or the type of graph displayed, see *Figure 7*. This invariably leads to continual duplication of the master report by each and every user. So now there is no master version of the report in use, everyone uses his or her own private personalized version.

Discoverer Drake resolves this major problem by using a powerful new feature called 'Personalization'. This allows users to totally customize the appearance of a report and update their portal page with those changes. However, the master report is retained and remains the master version of the report. The users modifications are all saved as deltas. Therefore, there is still only one version of the report in existence.



Security

There are a number of reasons why businesses find single sign-on (SSO) a compelling solution. Without SSO, each user must maintain a separate identity and password for each application he or she accesses. Maintaining multiple accounts and passwords across multiple products for each user is insecure and expensive. It is insecure because users tend to write multiple passwords down usually with the product or application name next to it. Or they reuse passwords across multiple products. Administrators can take quite a while to delete all users accounts when a user leaves which creates security holes. Gluing products together using a portal only helps to highlight this problem. The whole process is expensive because both user and administrator time is wasted when passwords are forgotten or must be reset, and because administrators must create and delete multiple accounts for each user.

Within a portal environment business users want to identify themselves once and only once. They expect each report within their portal to understand who they are from that single-sign on process.

The Oracle approach to single sign-on provides a framework for secure single sign-on from a browser to all types of Discoverer reports. Discoverer Drake takes full advantage of this framework. This provides an important value-added security service for businesses. Fortunately for business users this "*must have"* feature is a totally transparent standard feature of Discoverer Drake.

Single View

An enterprise information portal is more than a series of BI reports and KPI gauges. A true enterprise information portal merges data and presentations from a whole variety sources. Enterprise portals are specifically designed to be the single source of interaction with corporate information and the focal point for conducting day-to-day business. OracleAS Portal combines a rich, declarative environment for creating a portal Web interface, publishing and managing information, accessing dynamic data, and customizing the portal experience. Using OracleAS Portal, businesses have the power to connect employees, partners, and suppliers with the information they need and the flexibility to create views tailored to each community.

Figure 8 Discoverer Interactive Dashboard

Oracle Portal is more than just a BI dashboard, and this ability to reach beyond the boundaries of traditional BI reporting allows business' to enhance and add additional insight to their corporate BI reports. Portlets can be connected to produce integrated Web-based applications, even when the portlets publish data from different systems. By defining portlet parameters and associating them with page-level parameters and events, the page developer can in effect wire portlets together. A page parameter or selections in one portlet can actually drive the content and display of other portlets and pages. No code required!

The use of Portal page parameters and Discoverer report parameters provides a rich environment for developing user interaction across a portal page. This level of interaction allows users to create pages similar to that shown opposite. The four geographic buttons on the left of the page drive the four graphs. As the user clicks on a specific region icon a parameter is passed to each Discoverer Graph causing the each graph to refresh to view the data for the selected region, see *Figure 8*.

Only Oracle AS Portal provides this level of interaction within a simplified business user focused environment.

CONCLUSION

You already trust Oracle with managing your most critical data. Now, let Oracle provide your organization with a solid business intelligence platform for secure information access and information personalization.

There is no better, more secure, and cost effective way to gain essential business insight. Get more value for less effort, get Oracle Discoverer Drake

PRODUCTS USED IN THE CASE STUDY

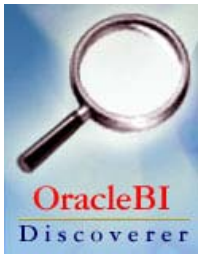
The case study will use the following products:

- Oracle 10g Database
- Oracle Discoverer "Drake" 10.1.2
- Oracle Portal/Discoverer Portlet Providers

Oracle Database 10g

Previously, building a business intelligence system required integration of multiple server products. In addition to the database, completely separate engines for ETL, online analytical processing (OLAP), and data mining were required. This meant that four different engines had to be learned and managed, and multiple copies of the metadata and data needed to be synchronized.

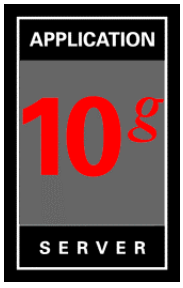
Oracle Database 10*g* provides the platform for all business intelligence applications. Oracle Warehouse Builder 10*g* provides the best tool for designing, deploying, and managing the business.



OracleBI Discoverer

OracleBI Discoverer is an ad-hoc query and analysis tool comprised of several components. These components, which can be used independently or in collaboration, are designed to work over the Internet and empower novice end users and business analysts alike.

Using Discoverer, you can access data that is purely relational in design, or data that has been prepared to leverage Oracle OLAP. Discoverer's user interface enables users to focus on analysis rather than the complexities of the database or its query languages. Discoverer opens up the analytic power of the database, enabling novice end users the ability to turn data into smart business decisions.



Oracle Application Server Portal

Oracle Application Server 10*g* offers a complete and integrated run-time infrastructure for your Web applications at a low cost. The tight integration between Discoverer and OracleAS Portal empowers users to publish their individual reports to executive dashboards, or create URL links to a list of reports that they can access from corporate portals. Discoverer report builders and analysts can use OracleAS Portal to enable other users in the organization to easily access the information by subscribing to these portal pages.

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