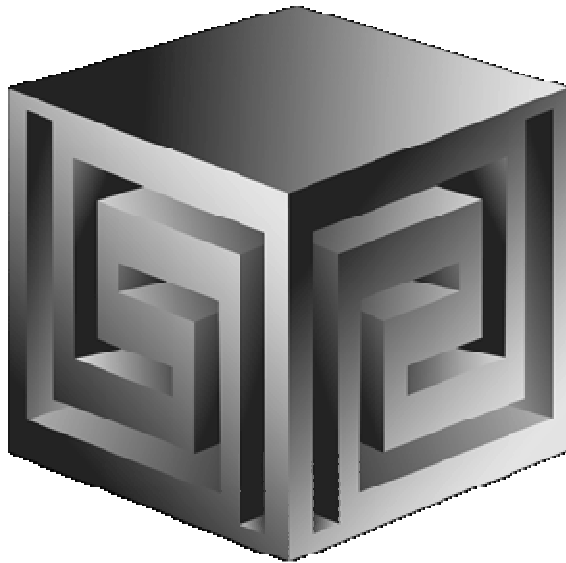


Front-End Tools to View OLAP Data

IOUG Live! 2005



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<http://www.vlamis.com>

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Vlami Software Solutions, Inc.

- **Founded in 1992 in Kansas City, Missouri**
- **Oracle Partner and reseller since 1995**
- **Specializes in ORACLE-based:**
 - ☐ **Data Warehousing**
 - ☐ **Business Intelligence**
 - ☐ **Data Transformation (ETL)**
 - ☐ **Web development and portals**
 - ☐ **Express-based applications**
- **Delivers**
 - ☐ **Design and integrate BI and DW solutions**
 - ☐ **Training and mentoring**
- **Expert presenter at major Oracle conferences**

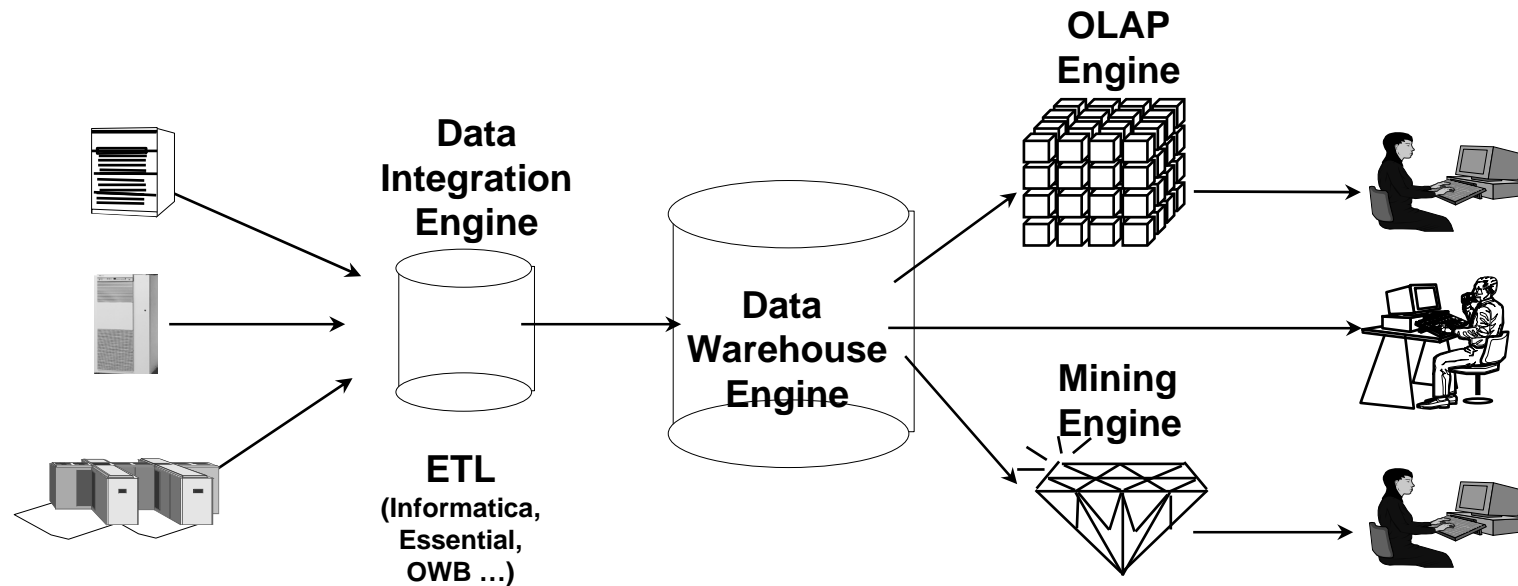


Outline

- **Introduction - History**
- **Overview of OLAP, BI Beans and Discoverer fit together**
- **Discoverer OLAP Specifics**
 - ☐ **General Features of Discoverer OLAP**
 - ☐ **Plus or Viewer**
 - ☐ **Demo**
- **BI Beans Specifics**
 - ☐ **General Features of BI Beans Applications**
 - ☐ **Features Unique to BI Beans**
 - ☐ **Demo**
- **Spreadsheet Add-in Specifics**
 - ☐ **Demo**
- **Which is Right for you?**



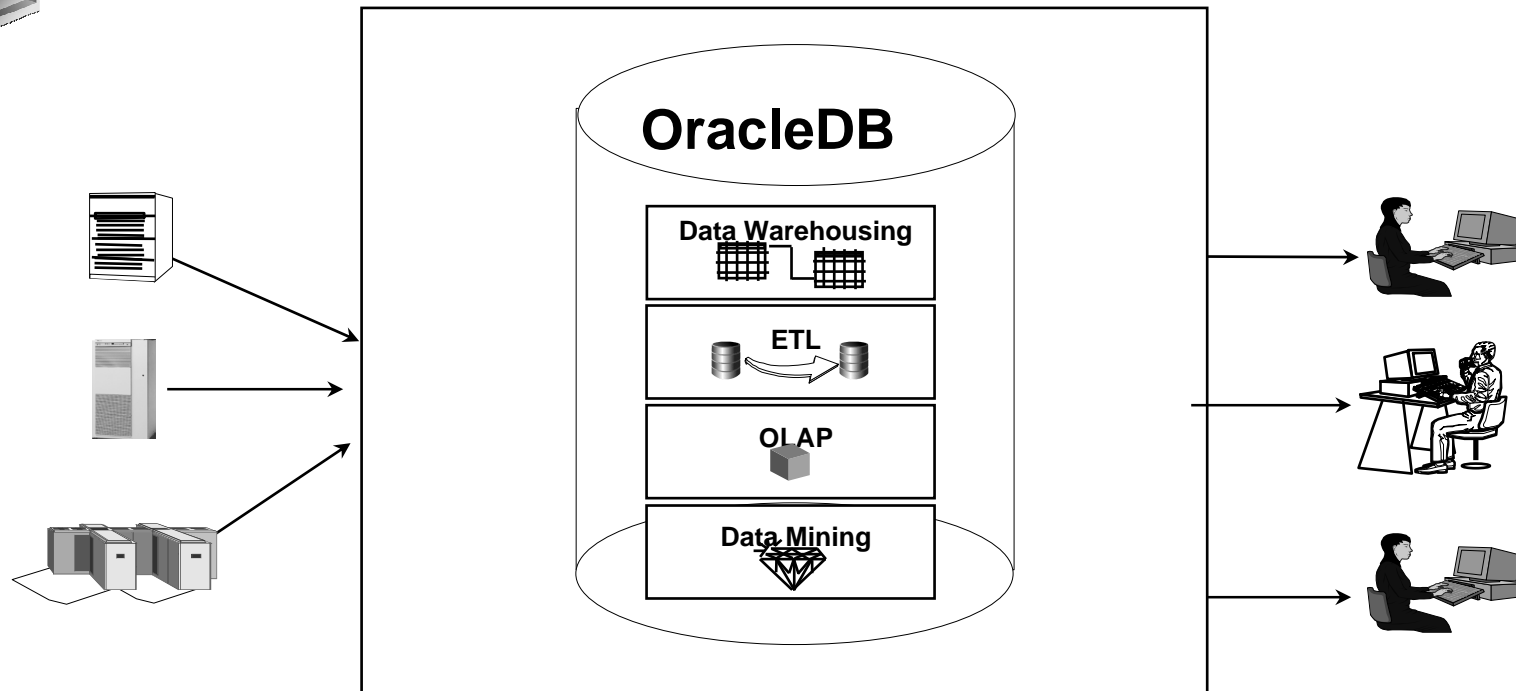
Business Intelligence the Old Way



- Special purpose engines for differing tasks
- Metadata migration tools ease replication
- User interfaces generally different for different tools



BI the New Way: Oracle DB

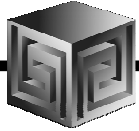


- Single business intelligence platform
 - Reduce administration, implementation costs
 - Faster deployment & Improved scalability and reliability



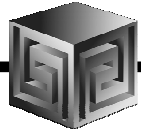
Why a Separate OLAP Tool?

- **Empowers end-users to do own analysis**
- **Frees up IS backlog of report requests**
- **Ease of use**
- **Drill-down**
- **No knowledge of SQL or tables required**
- **Exception Analysis**
- **Variance Analysis**



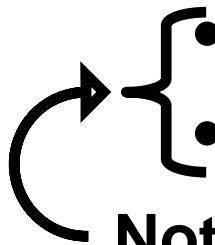
What Does OLAP Add to a DW?

- **Multidimensional user view of data**
- **Users create own reports**
- **Users create own measures**
- **Easy drill-down, rotate**
- **Iterative discovery process (not just reports)**
- **Ad-hoc analysis**
- **Easy selection of data with business terms**



What Does Oracle OLAP Add to a DW?

- Multidimensional user view of data
- Users create own reports
- Users create own measures
- Easy drill-down, rotate
- Iterative discovery process (not just reports)
- Ad-hoc analysis
- Easy selection of data with business terms
- OLAP DML with what-if, forecasting
- Platform for extensions



Not exposed with Discoverer



What Makes a DW OLAP-Ready?

- **Star schema design**
- **Simple dimension tables (level-based)**
- **All tables dimension or fact
(no "auxiliary tables for dimension tables)**
- **Each child has single parent (no many-to-many)**
- **Total level at top of each dimension**
- **End_date and Timespan attributes for TIME**
- **Unique descriptions across all levels**
- **Fact tables with additive measures**



Oracle BI – Getting the Data In

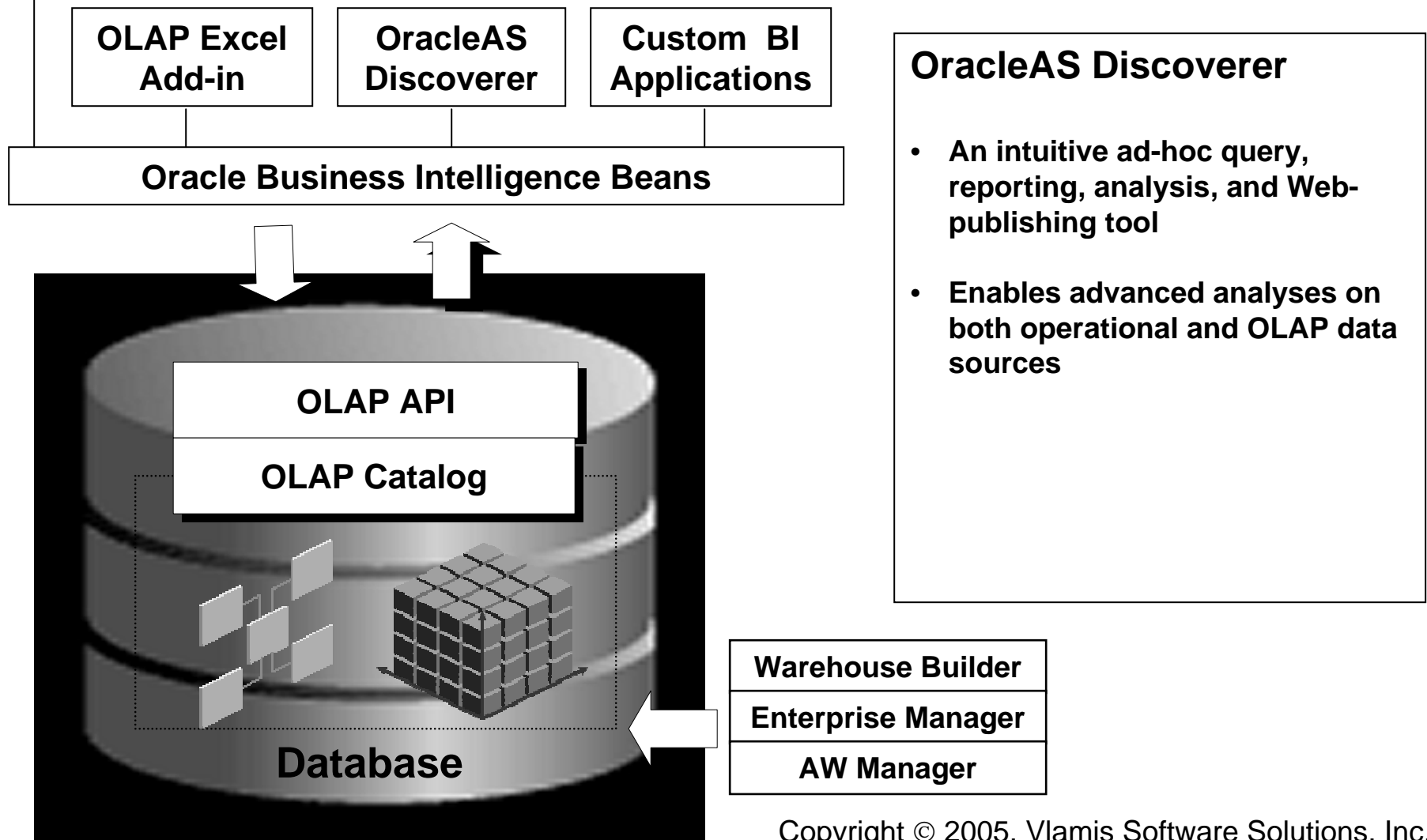
- **Storing / calculating with the data**
 - ☐ Oracle RDBMS
 - ☐ Oracle OLAP (an option to the RDBMS)
- **Getting the data in / managing**
 - ☐ Oracle Warehouse Builder
 - ☐ Oracle Enterprise Manager
 - ☐ Analytic Workspace Manager



Getting the Data Out

- **Once the Data is in OLAP how do we get the data out?**
- **Alternatives**
 - ☐ **BI Beans applications (Custom or pre-built)**
 - ☐ **Discoverer**
 - ☐ **Oracle Reports**
 - ☐ **SQL Access from any SQL tool**
 - ☐ **Spreadsheet Add-in**
 - ☐ **Any except Spreadsheet add-in can be in a portal and with web interface**

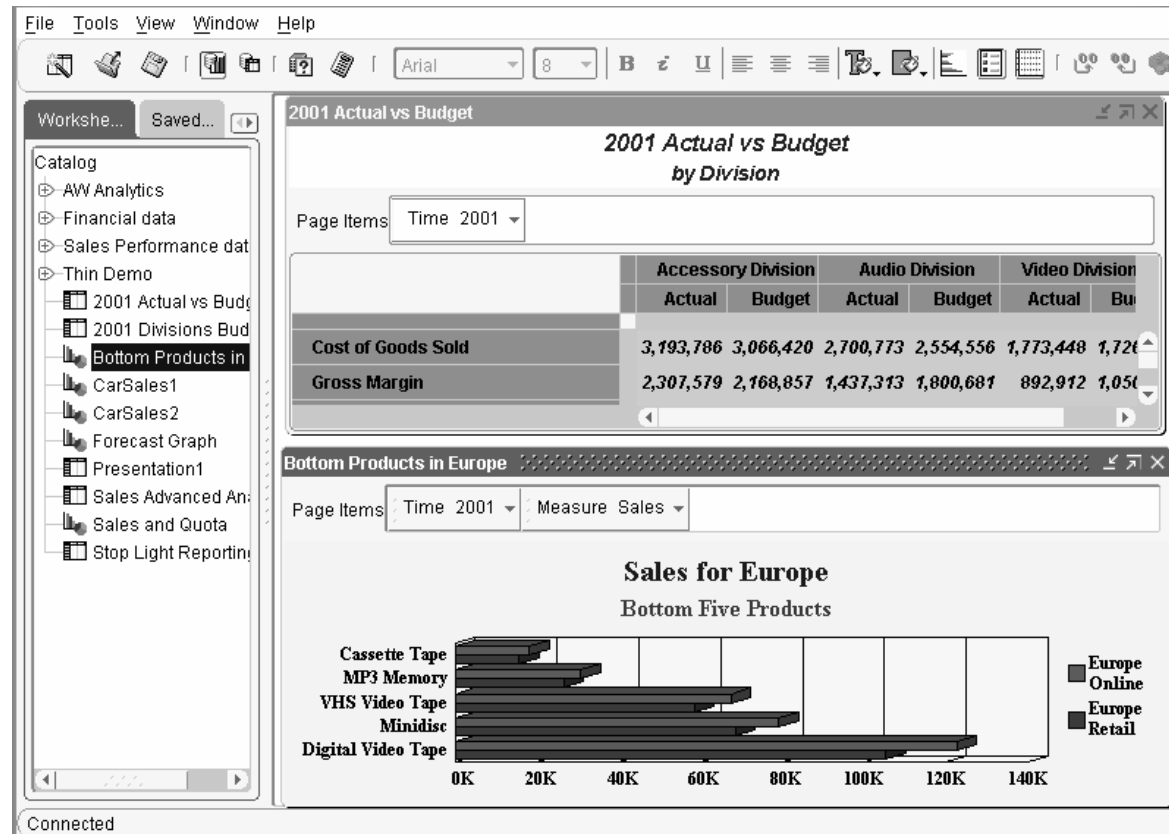
Ad-hoc Access OLAP via Discoverer



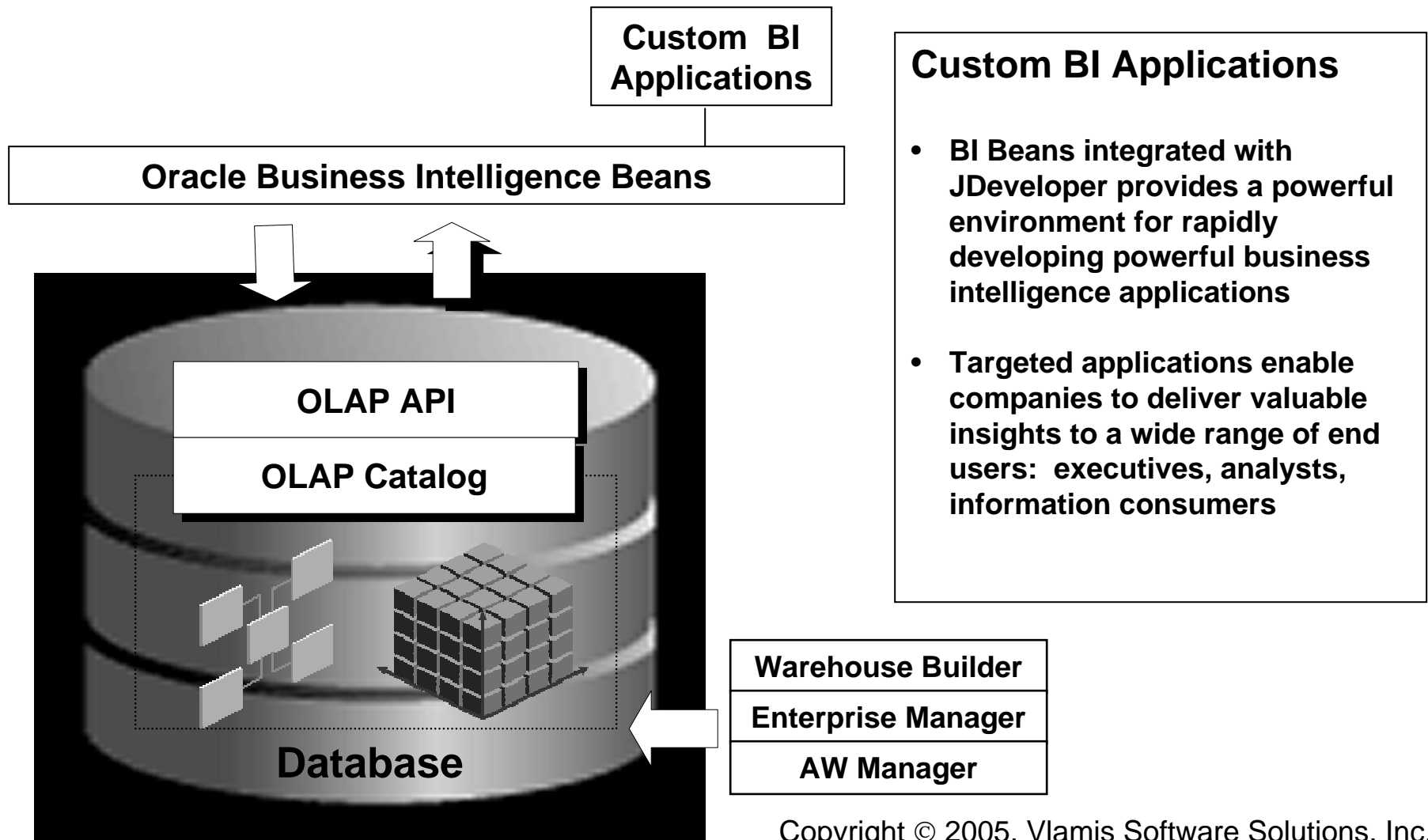


Discoverer 10g – Discoverer OLAP

- Currently AWM creates EUL for SQL Access
- Disco 10g adds Direct Access to OLAP

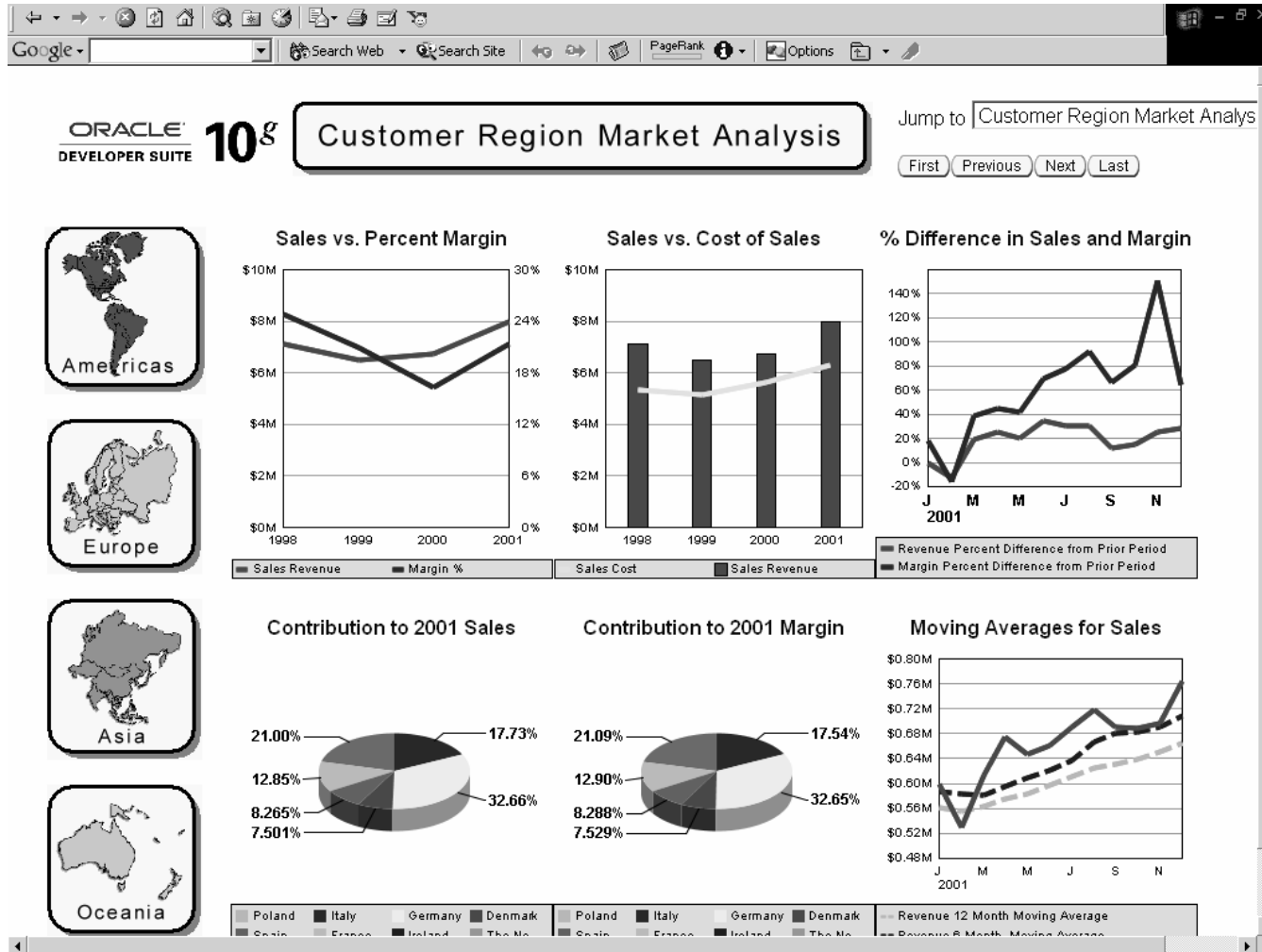


Custom Development via BI Beans





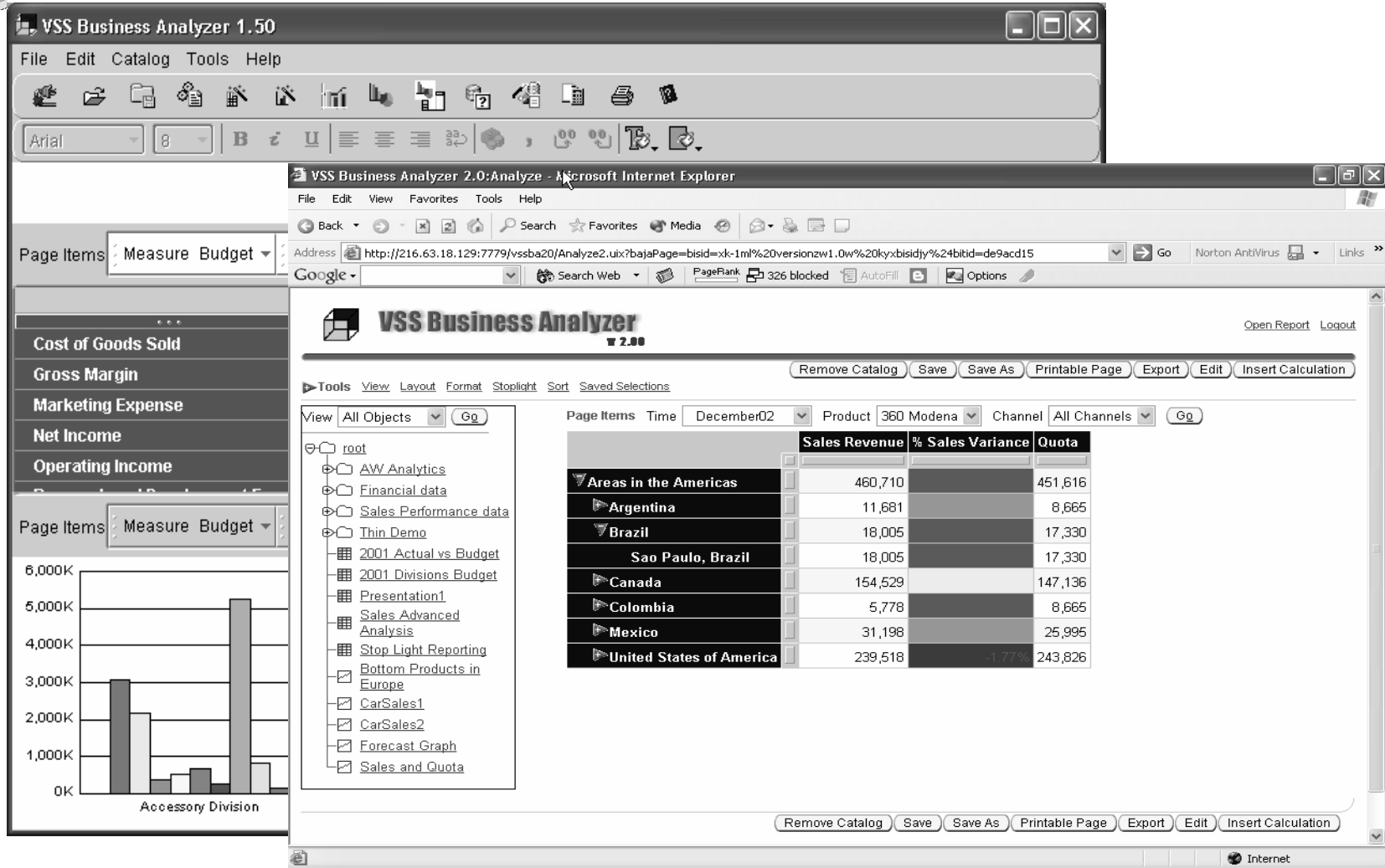
Custom BI Application



BI Beans Applications



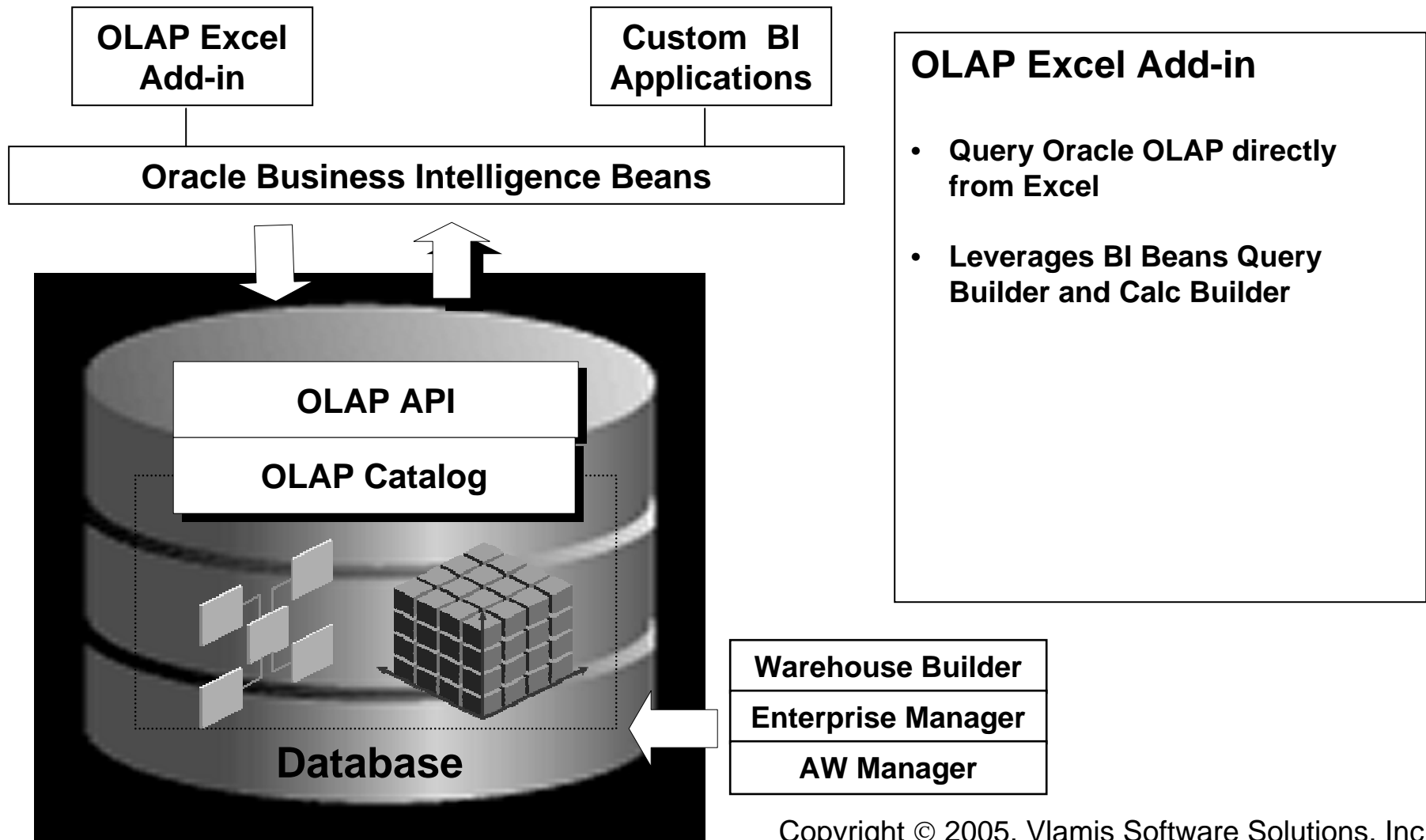
Thick Client



Thin Client

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Access to All OLAP Data from Excel





Spreadsheet Add-In

Microsoft Excel - Book1

File Edit View Insert Format Tools Data Window OracleOLAP Help

Worldwide All Channels

	Sales	Quota	Quota Var %
2000		2000	2000
CD Player	16 558 146	16 154 468	> 50%
Amplifier	14		
VHS Camcorders	13		
Receiver	13		
Digital Camcorders	12		
	70		

Oracle OLAP Query Wizard

Items Layout Dimensions

Choose Product From: Standard hierarchy

Available:

- Exception
- Top/Bottom
 - Top 10 based on Sales
 - Bottom 5.0% based on Quota
 - Making up top 3.0 % of Quota
- Hierarchy
- Time/Ordinal
- Match

Selected:

Steps Members

1. Start with Equipment/Parts: Top 5 based on Sales

Sort Save

Help OK Cancel

Sheet1 Sheet2 Sheet3

Ready

NUM

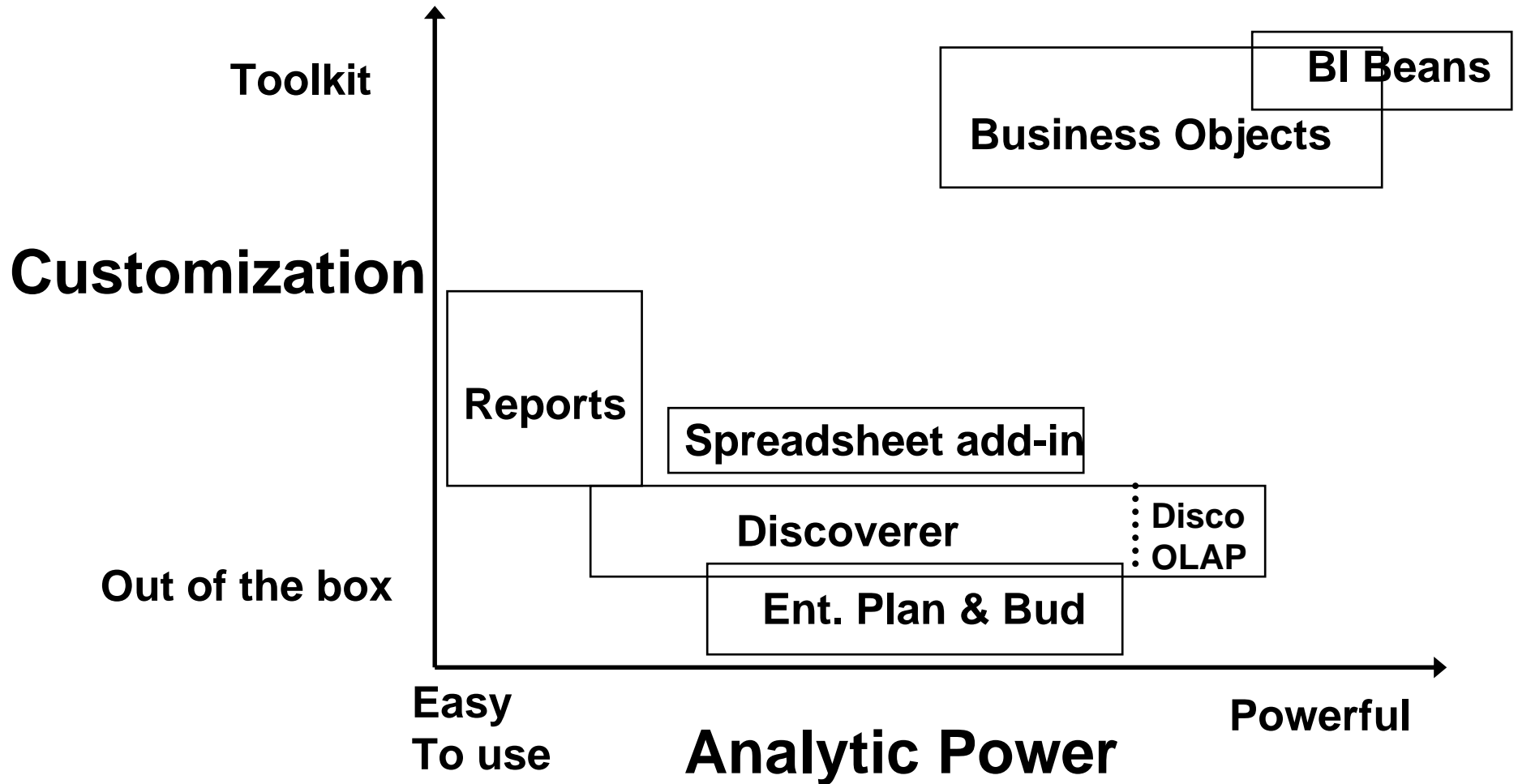


What Access Tool?

- **Java OLAP API designed for products**
- **Discoverer for ad hoc analysis**
- **BI Beans for custom applications (using JDev)**
- **Spreadsheet Add-in for access from Excel**
- **Oracle Reports for highly formatted reports**
- **Oracle Apps for analysis of Apps data**
- **3rd Party tools fill in gaps**



Choices for Viewing Data





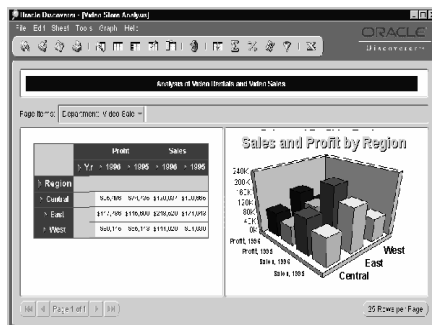
Discoverer Specifics

- **Discoverer "Classic" still there**
- **Discoverer OLAP built with BI Beans**
- **Integrated Relational and Multidimensional access to data**
- **Discoverer OLAP uses BI Beans repository with Discoverer extensions**
- **Uses "Workbook" metaphor to organize crosstabs and graphs into screens**

Three Deployments of Discoverer

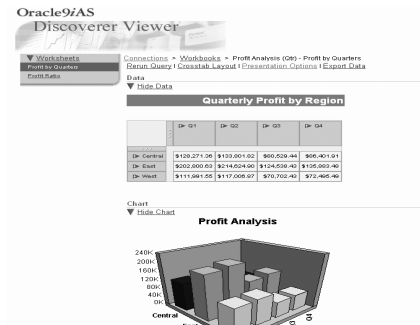


Discoverer Plus



Power user tool
Creates new workbooks
Runs via applet

Discoverer Viewer

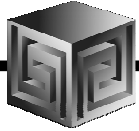


Casual user tool
Existing workbooks
Launched from Browser
Zero footprint

Discoverer Portlets



Casual user tool
Existing workbooks
Part of Portal
Launches Viewer
Zero footprint

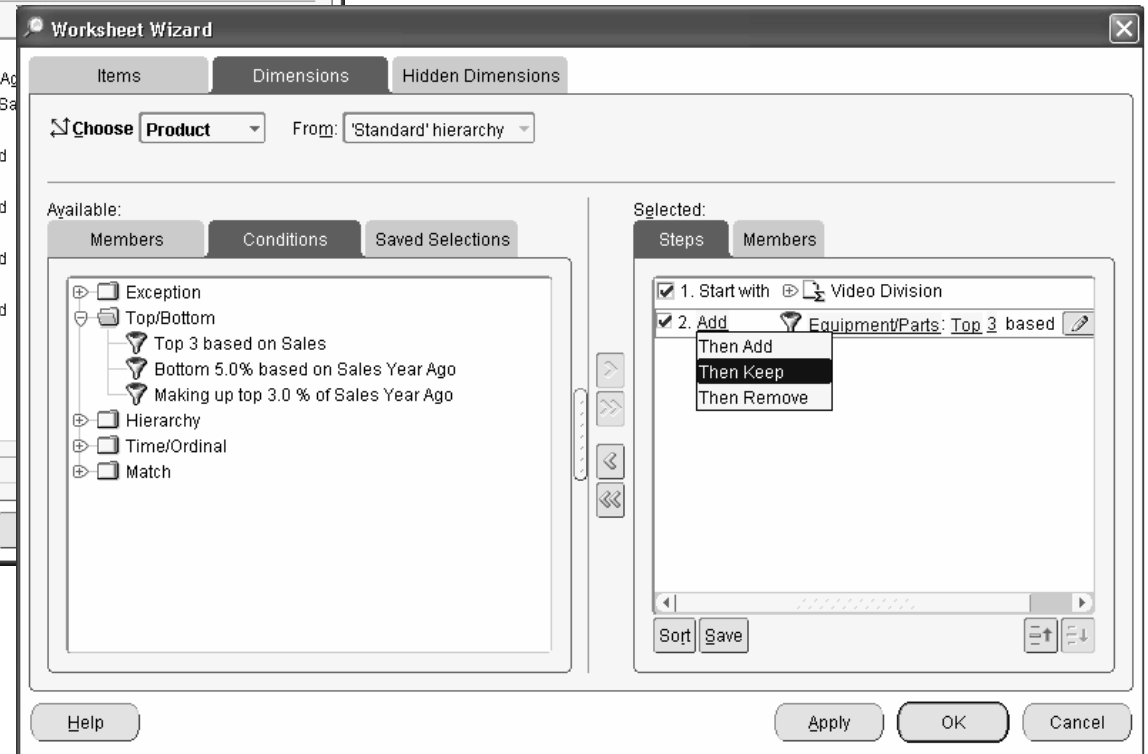
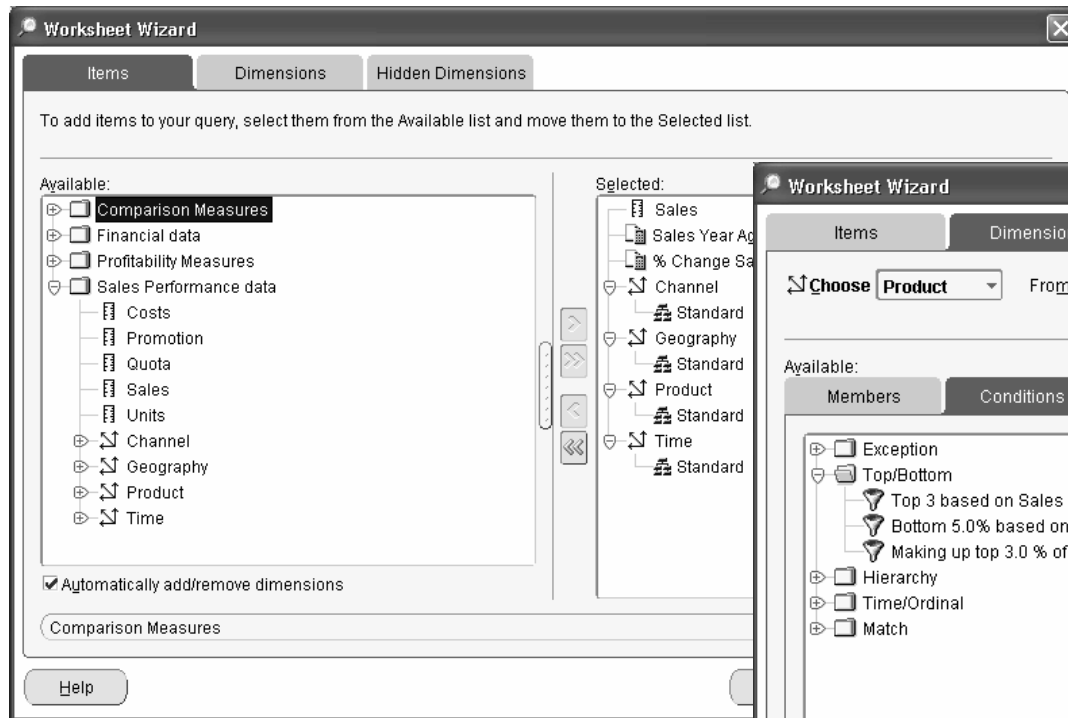


Discoverer Development Themes

- **Single tool for both relational and multidimensional analysis**
- **Easy access to powerful analytics of the database**
- **Highly customizable display**
- **Support collaboration**



Query Building



Simplified access
to analytics



Custom Calculations

Powerful calculations,
simple user interface

Calculation Wizard - Step 1 of 3: Name and Type

What would you like to name this calculation?

What type of calculation do you want to create?
Calculation Type:

- Advanced Arithmetic
 - Cumulative Total
 - Index
 - Percent Markup
 - Percent Variance
 - Rank
 - Share
 - Variance
- Prior/Future Comparison
 - Prior Value
 - Difference from Prior Period
 - Percent Difference from Prior Period

Description of selected type.

Help Back Next Finish

Calculation Wizard - Step 2 of 3: Percent Difference from Prior Period

Percent Difference from Prior Period
Returns the percentage difference between the current value of a measure and the value of that measure from a prior period.

What measure do you want to calculate percent difference for?
Measure:

Calculate percent difference based on values:
Over time in:

From:
☒ Year ago
☐ Period ago

Number Format:

Help Back Next Finish Cancel



Direct Manipulation

Members Saved Selections

Dimension: Measures

- Root
 - Comparison Measures
 - % Change Sales
 - Quota Variance
 - Sales Year Ago
 - Financial data
 - Profitability Measures
 - Sales Performance data
 - Costs
 - Promotion
 - Quota
 - Sales
 - Units

1. Start with Members

- Sales
- Sales Year Ago
- % Change Sales

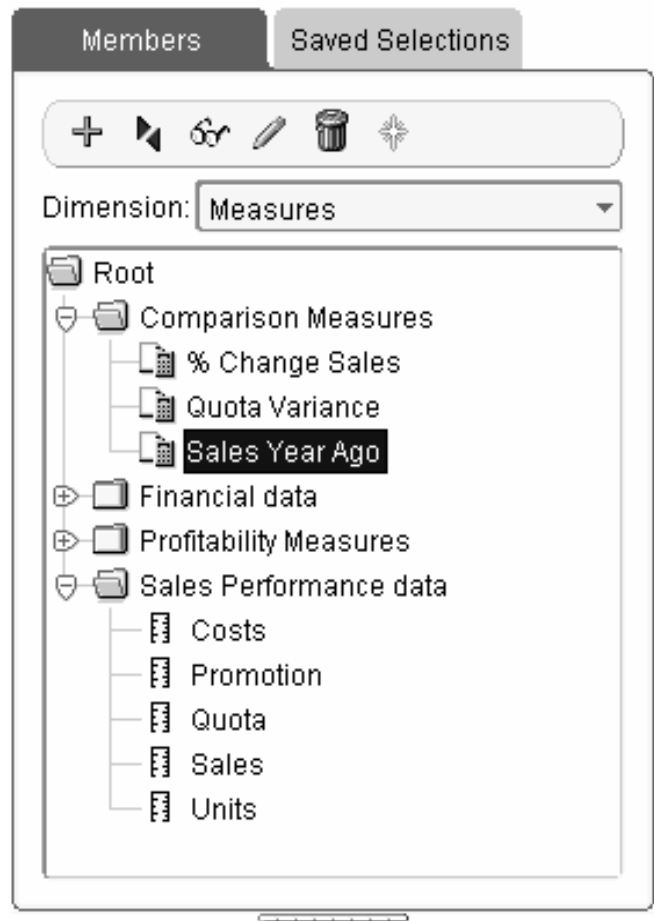
Navigator allows for direct manipulation of the query by providing drag and drop, right mouse, and push button access to common query actions.

Page Item Product All Products Time March 2001

Page Item	Product	Time
Worldwide	All Products	March 2001
Americas	All Products	March 2001
Asia	All Products	March 2001
Australia	All Products	March 2001
Europe	All Products	March 2001

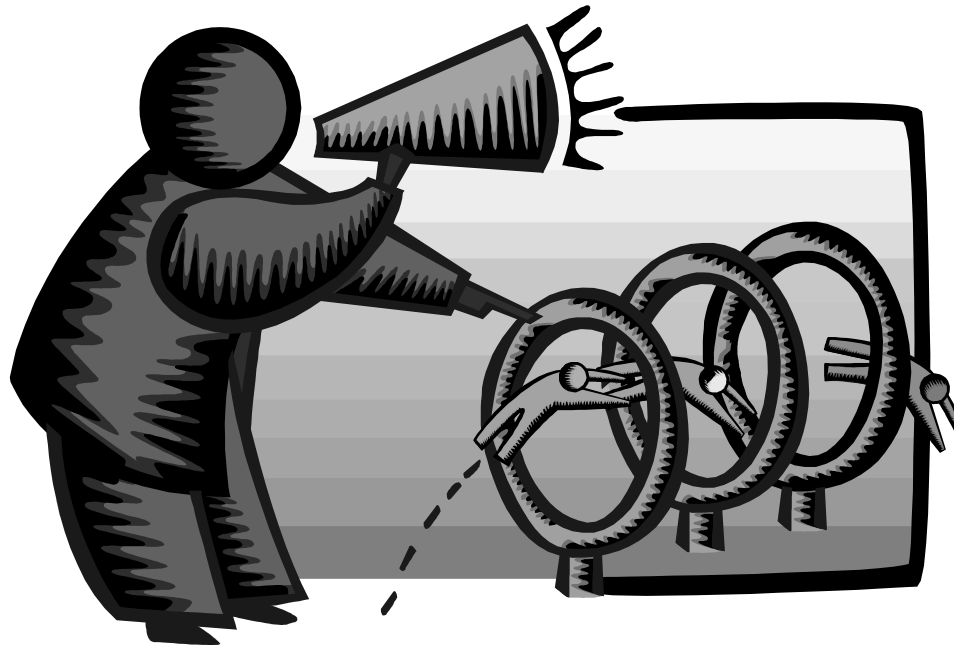
Sales vs. Year Ago Product Performance by Region Sales Trends

Navigator – Member Selection



- **Dimension members and measures can be selected and applied to the worksheet**

Demonstration of Discoverer OLAP





Discoverer Plus Features Over Vanilla BI Beans Application

- **Multiple deployments**
 - ☐ Thick applet
 - ☐ Thin viewer
 - ☐ Portlet
- **Worksheet metaphor**
- **Export to PDF**
- **Undo**
- **Drag and Drop selection changes**
- **Totals at bottom or right**
- **Other features as well**

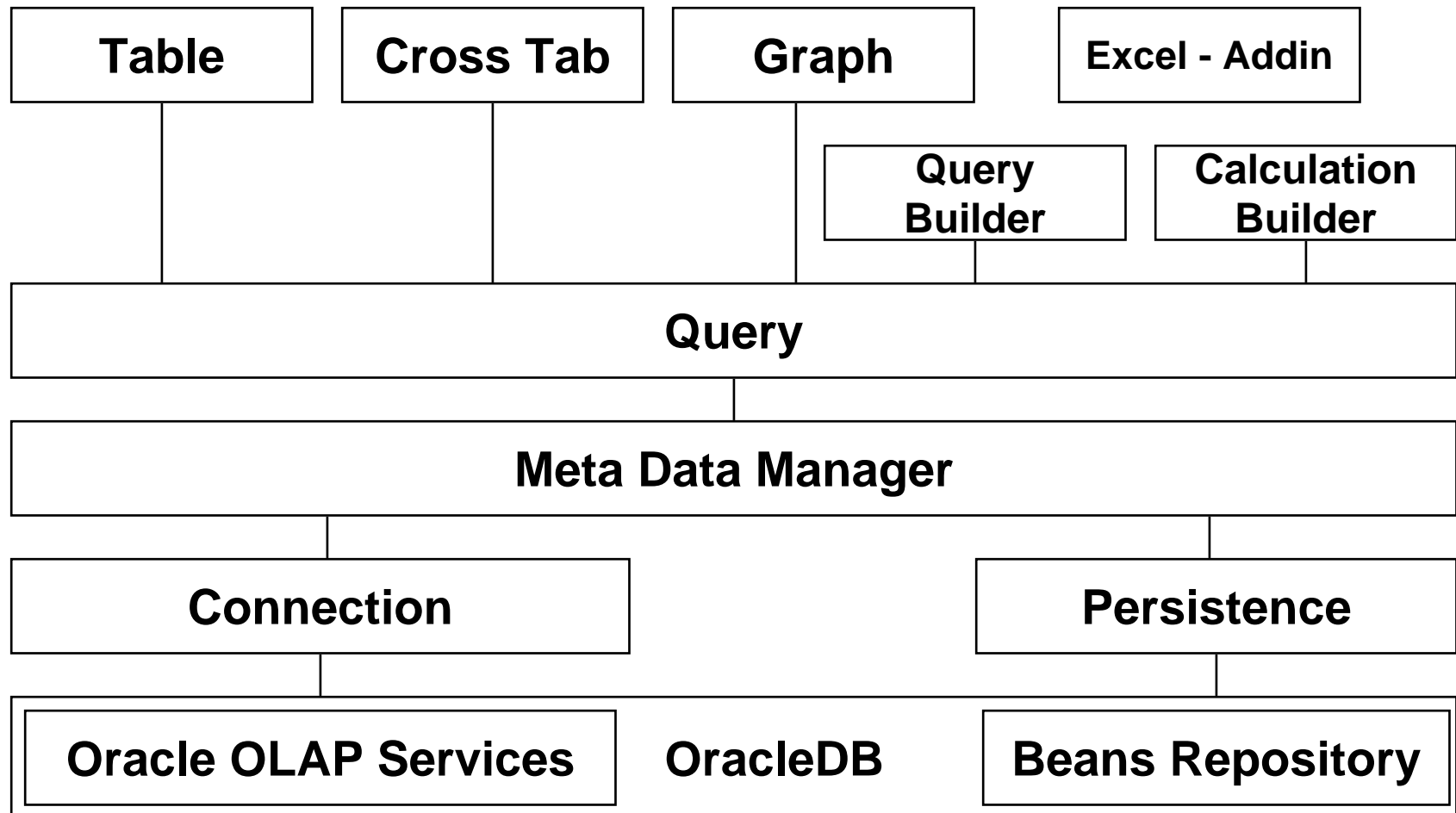


BI Beans Specifics

- **Can look like anything**
- **Since custom coded, can do anything**
- **Generally, use Cross-tab and Graph bean to present data**
- **Can integrate other data easily**
- **JDeveloper not required, but helpful**
- **No deployment license necessary**
- **Requires Oracle OLAP to run**



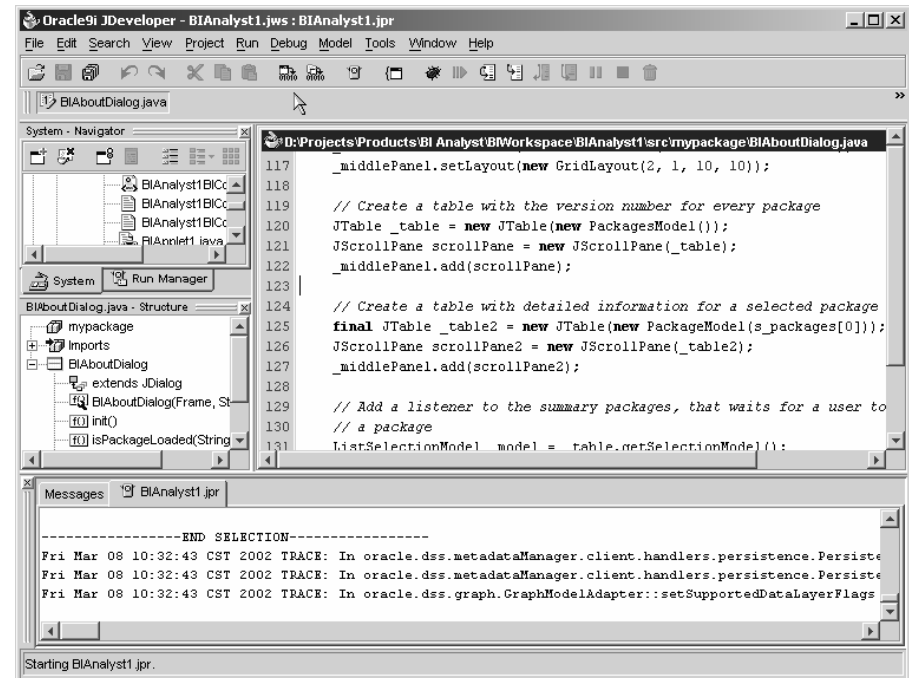
Business Intelligence Beans





JDeveloper Integration

- Single Development tool for Relational and OLAP dev
- Design-time integration objectives
 - ☐ Use JDeveloper concepts; extend when necessary
 - ☐ Live data access
 - ☐ Run application objects
 - ☐ Extensive use of Wizards to support rapid development
 - ☐ Use BI Beans runtime repository to enable multiple deployment options



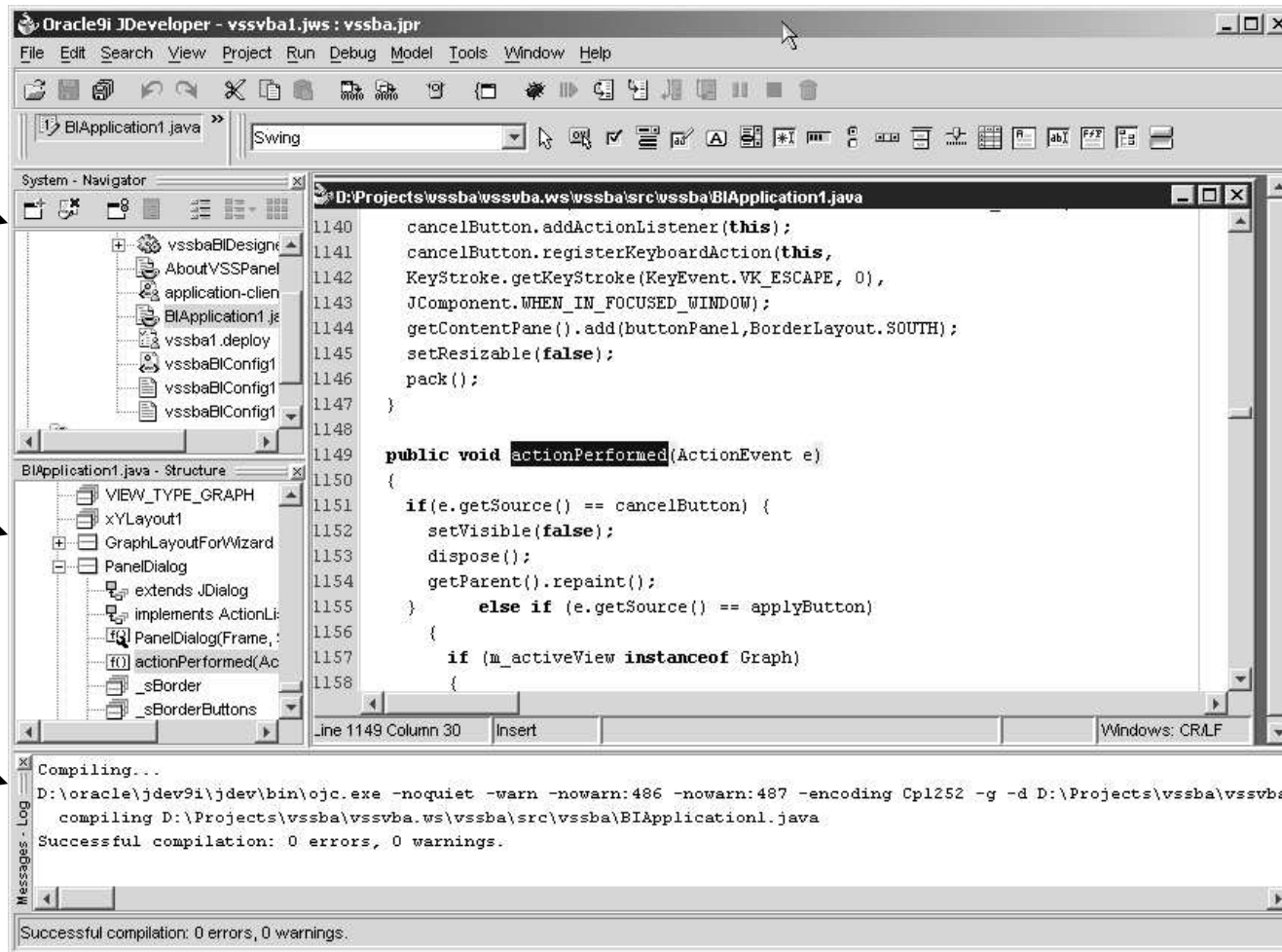


JDeveloper Environment

**System
Navigator**

**Structure
Window**

**Log
Window**

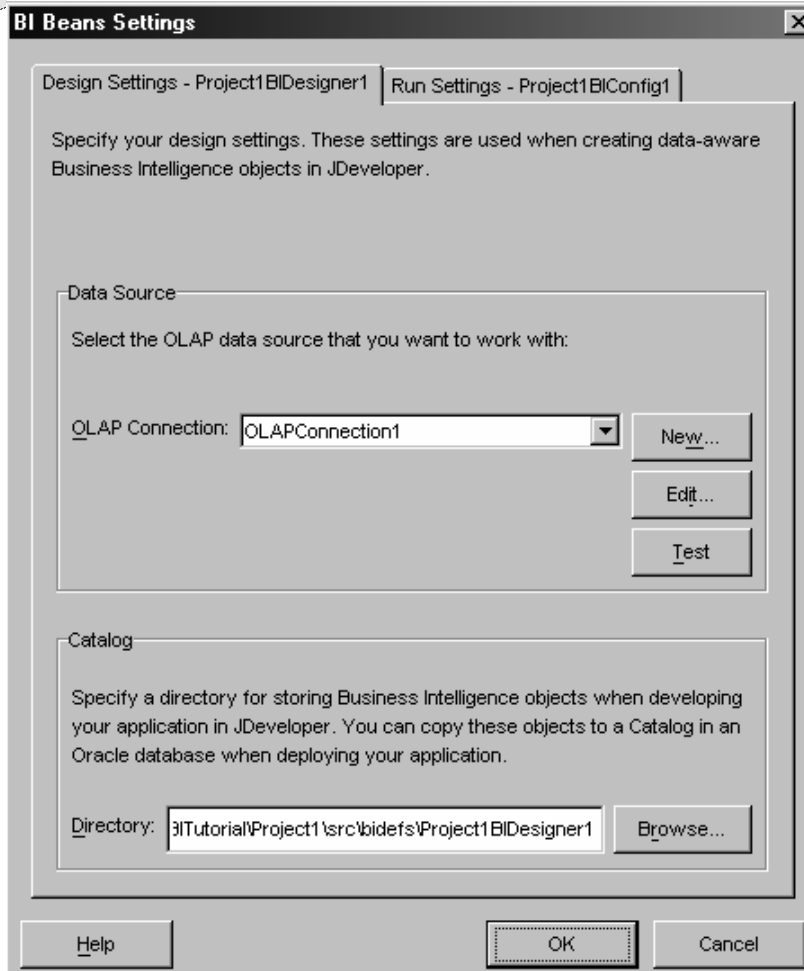


**Component
Toolbar**

**Code
Window**



BI Beans Designer Settings

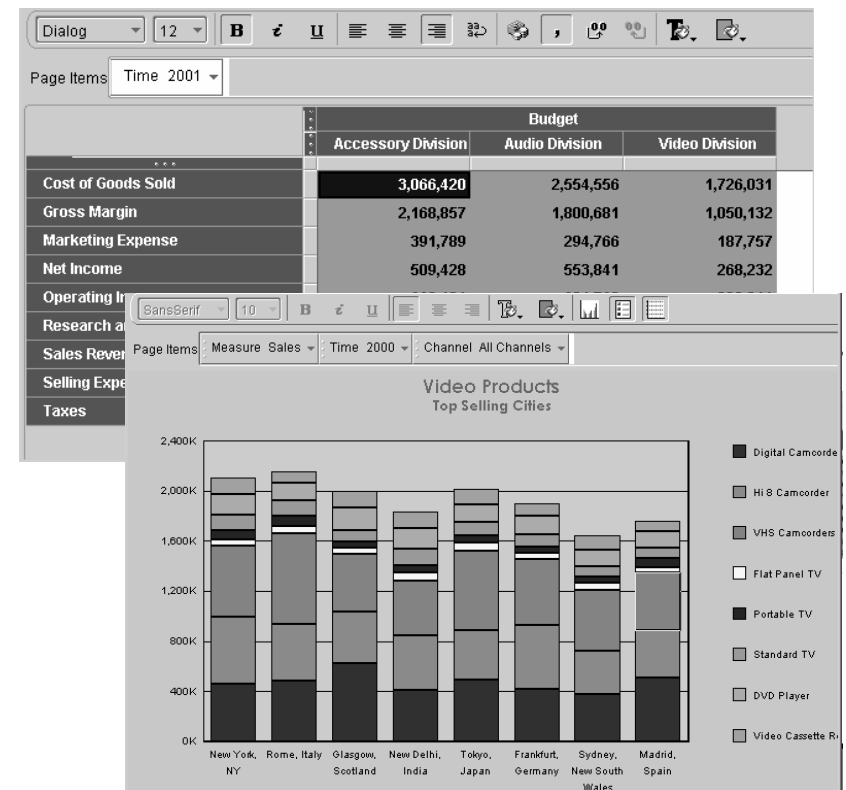


- **Container for Business Intelligence Objects**
- **References information needed to connect:**
 - ☐ **to Oracle OLAP**
 - ☐ **and the BI Beans Catalog.**
- **Design Settings - Lets you view and edit settings in your BI Designer object**
- **Run Settings - Lets you view and edit settings in your BI Configuration file**



Presentation Beans

- Provides common user interface across Oracle BI products
- Translate UI gestures into OLAP events
- Graph
 - ☐ Over 50 graph types
 - ☐ Can modify appearance
- Crosstab/Table
 - ☐ Cell level formatting
- View toolbar enables simple access to formatting capabilities
- Customers: Discoverer, Reports, Portal, CRM, Enterprise Planning and Budgeting, Balanced Scorecard
- ...



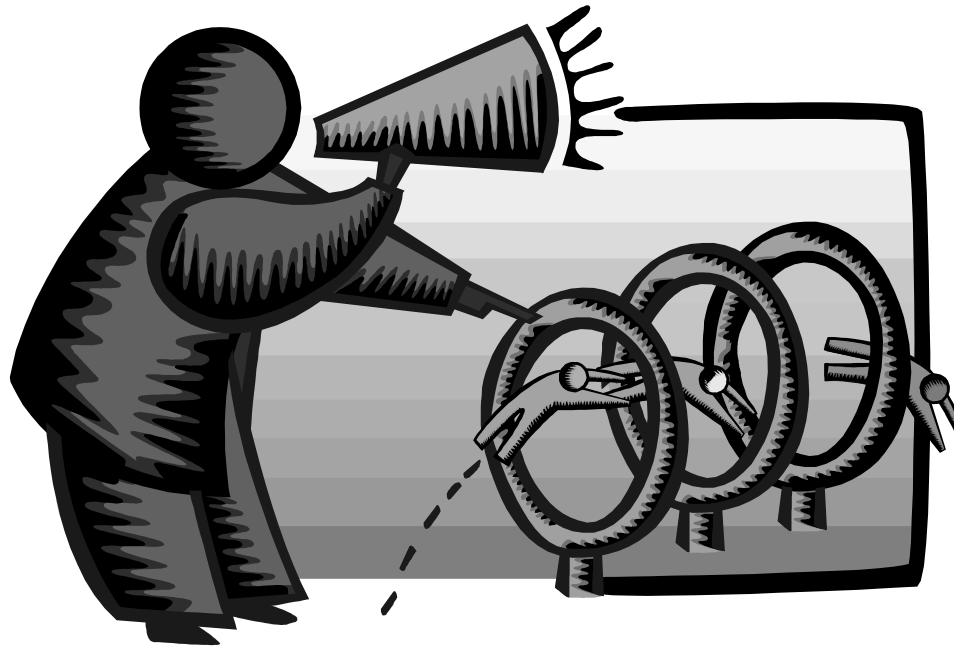


Business Intelligence Wizards

- **Specialized Wizards Built into JDeveloper**
 - ☐ **Connection Wizard**
 - ☐ **Calculation Wizard**
 - ☐ **Query Wizard**
 - ☐ **Presentation Wizard**
 - ☐ **Java Client Application Wizard**
 - ☐ **Servlet (JSP) Application Wizard**



Demonstration of BI Beans Application





Spreadsheet Add-in Specifics

- **Use instead of Discoverer as ETL OLAP Tool**
- **Allows access directly from Excel to entire OLAP cube**
- **Allows access to Query Editor**
- **Allows access to Calc Builder**
- **Presents data in familiar Excel interface**
- **Breaks down perception OLAP data "closed"**
- **Users love access from Excel!**



What Does Spreadsheet Add-in Do?

- **Adds OracleOLAP menu to Excel menu**
- **New Query gets data into Excel**
- **Edit Query changes selection in Excel**
- **Add New Calculation calls Calculation Wizard**
- **Allows for drilling and paging on OLAP data**
- **Saves queries between sessions**
- **Refresh Query refreshes queries from server**
- **Several options to modify behavior**



Spreadsheet Add-In

Microsoft Excel - Book1

File Edit View Insert Format Tools Data Window OracleOLAP Help

Worldwide All Channels

	Sales	Quota	Quota Var %
2000		2000	2000
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	70		

Oracle OLAP Query Wizard

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Choose Product From: Standard hierarchy

Available:

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 - Making up top 3.0 % of Quota
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Help OK Cancel

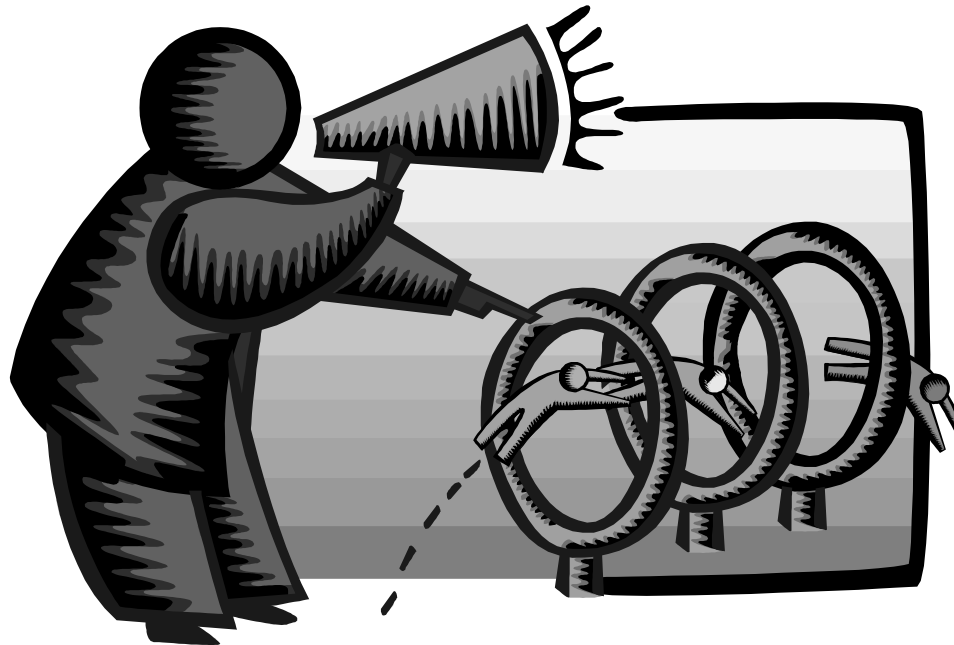
Sheet1 Sheet2 Sheet3

Ready

NUM



Demonstration of Spreadsheet Add-in





Which Is Right For You?

BI Beans

- Need customizations
- Integrate with other non-Oracle Applications
- Need to extend in future
- Have Java programmers
- No problem with:
 - ☐ Documentation
 - ☐ Installation
 - ☐ Support
 - ☐ Training

Discoverer

- Want out-of-the-box setup
- Already have Discoverer
- Want Portal integration
- Like Discoverer functionality

Excel Add-in

- Want to drive from Excel
- Free (with Oracle OLAP)
- Users OK with creating own



Enterprise Planning and Budgeting (EPB)

- **Part of Oracle E-Business Suite (Oracle Apps)**
- **Integrated security**
- **Workflow oriented**
- **Extends calc templates**
- **Includes custom aggregates**
- **Thin BI Beans deployment**
- **Worksheets enable writeback**
- **Migration tools from OFA/OSA eventually**



Other OLAP Presentations

U3: Managing Oracle OLAP

Chris Claterbos, Dan Vlamis, Vlamis Software Solution, Inc.

Sunday, May 01, 2005 8:30 AM - 4:30 PM

502: Oracle OLAP--How Does it Really Work?

Dan Vlamis, Vlamis Software Solutions, Inc.

Monday, May 02, 2005 10:00 AM - 12:00 PM

505: Developing Advanced Business Intelligence Applications with BI Beans 10g

Chris Claterbos, Vlamis Software Solution, Inc.

Monday, May 02, 2005 1:00 PM - 3:00 PM

520: Introducing the Oracle BI Discoverer 10g "Drake"

Steve Illingworth, Oracle Corporation

Tuesday, May 03, 2005 1:00 PM - 2:00 PM

512: Front-End Tools to View OLAP

Dan Vlamis, Vlamis Software Solutions, Inc.

Tuesday, May 03, 2005 4:45 PM - 5:45 PM

521: Oracle Warehouse Builder 10g

Steve Illingworth, Oracle Corporation

Wednesday, May 04, 2005 10:00 AM - 11:00 AM

617: The Art and Science of Discoverer 10.1.2

Michael Armstrong Smith, Armstrong-Smith Consulting

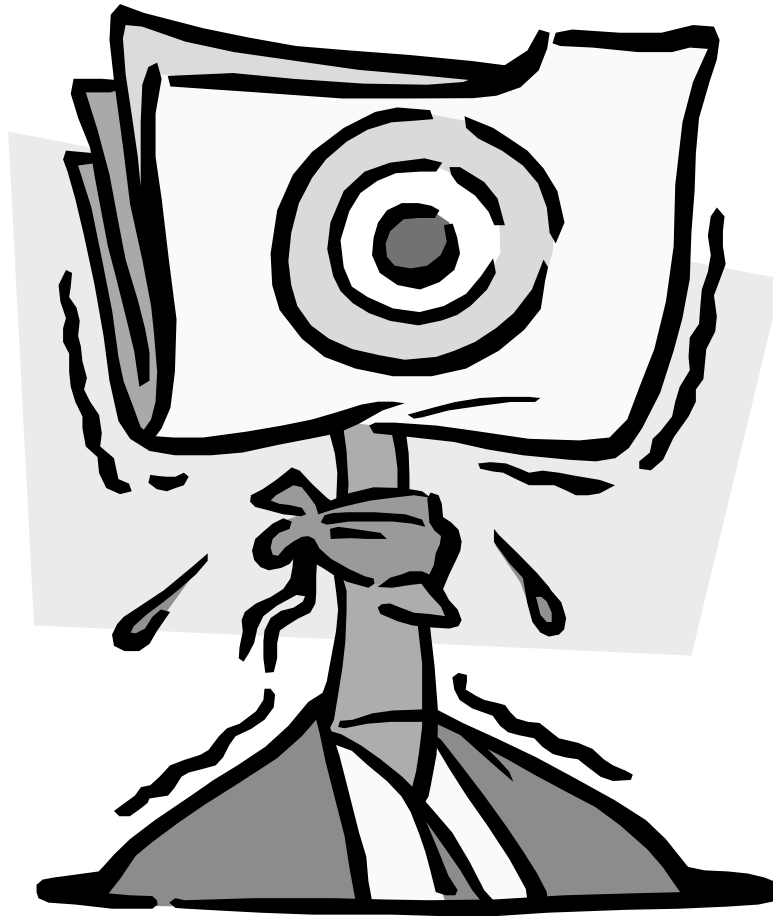
Wednesday, May 04, 2005 10:00 AM - 12:00 PM

508: Oracle Warehouse Builder 10g and OLAP - What's New?

Chris Claterbos, Vlamis Software Solution, Inc.

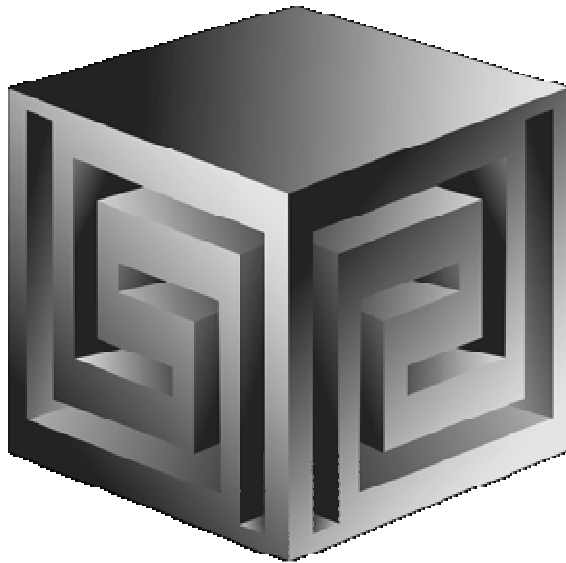
Wednesday, May 04, 2005 1:00 PM - 3:00 PM

QUESTIONS?



Front-End Tools to View OLAP Data

IOUG Live! 2005



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