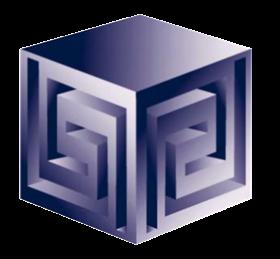
Oracle's Business Intelligence Technologies

KCOUG 2003 Fall Conference October 27, 2003



Dan Vlamis dvlamis@vlamis.com Vlamis Software Solutions, Inc. http://www.vlamis.com

Copyright © 2003, Vlamis Software Solutions, Inc.

Vlamis 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 such as Express Objects, Express Web Agent, OSA, OFA
- Delivers
 - □ Design and integrate BI and DW solutions
 - □ Training and mentoring
- Expert presenter at major Oracle conferences



- Problem Statement
- Overview of Oracle-based solution
- Products in Oracle BI stack
- Demonstrations of some products



Problem Statement

- The typical data warehouse infrastructure fragments data and business rules
 - □ Increased costs
 - □ Inconsistent analysis



Fragmentation

□ Types of fragmentation

- Subject specific data marts
 - -Sales, finance, human resources, etc.
- Geographically fragmented data
 - -Americas, Europe, Asia Pacific, etc.
- Database technology fragmentation
 - -Relational and multidimensional
- Tools induced fragmentation
 - -Separate tools for relational and multidimensional databases



Fragmentation

• What if you had ...

- □ Five subject areas
- □ Five geographic regions
- □ Relational and multidimensional analysis of each
- Separate tools for both relational and multidimensional databases

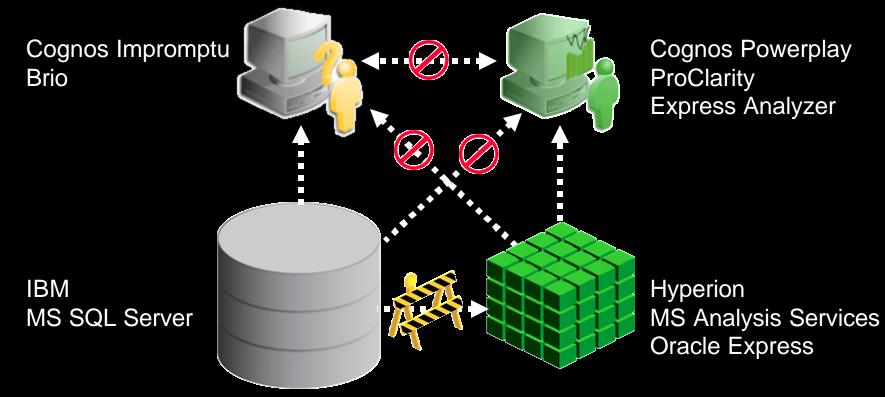


Fragmentation

- You would have ...
 - □ 50 separate databases to manage
 - □ Latency and synchronization problems
 - Business rules in each database and in each tool
- You would not have a single, unified view of the enterprise with
 - □ A single version of the data
 - □ Consistency of business rules

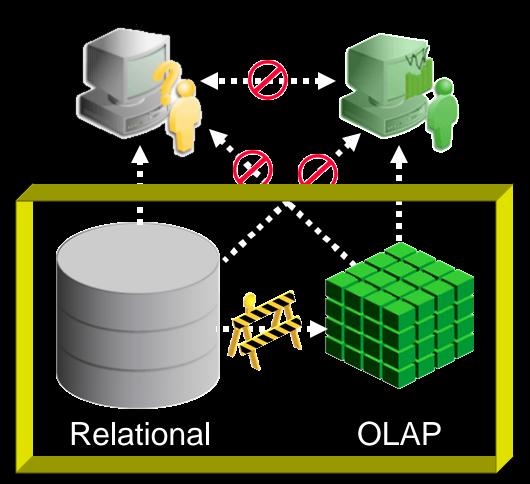


The Old Way Information & Data Fragmentation



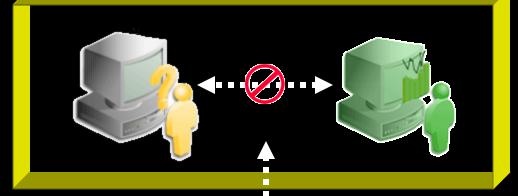


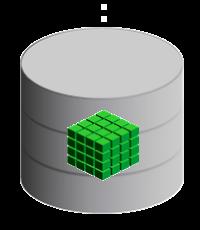
The Oracle Way Information & Data Consolidation





The Oracle Way Information & Data Consolidation

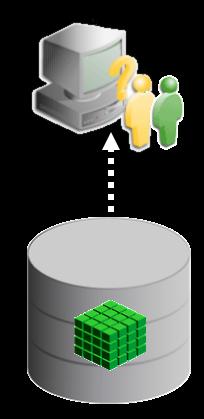




Relational & OLAP Databases Unite



The Oracle Way Information & Data Consolidation



Relational & OLAP Tools Unite

Relational & OLAP Databases Unite



Oracle BI Stack

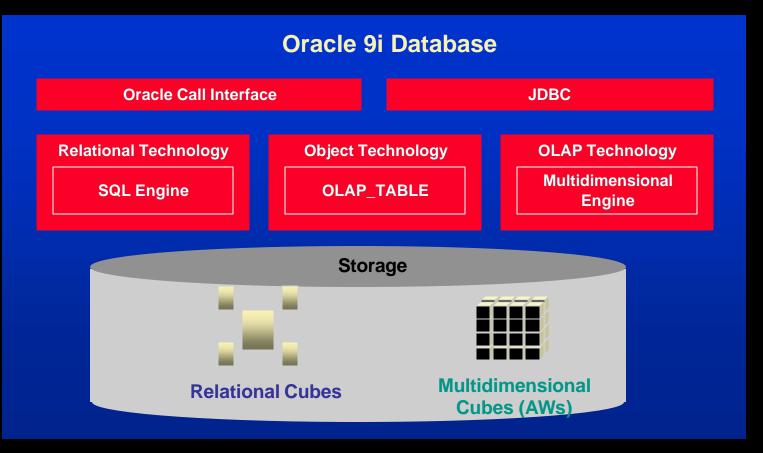
- Storing / calculating with the data
 - □ Oracle RDBMS
 - □ Oracle OLAP (an option to the RDBMS)

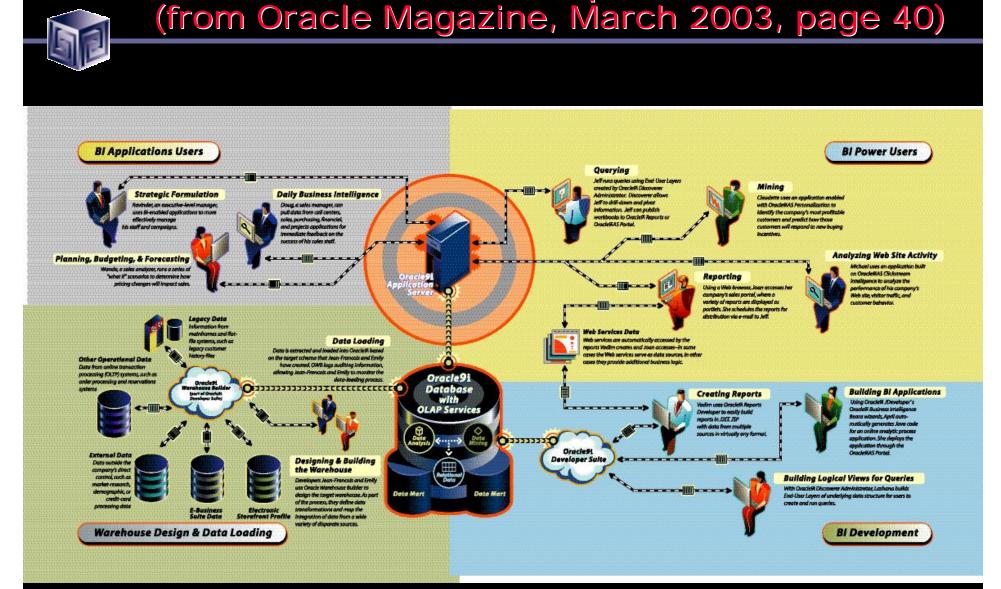
Getting the data in / managing

- □ Oracle Warehouse Builder
- □ Oracle Enterprise Manager
- □ Analytic Workspace Manager (part of OEM)
- Getting data out
 - □ Oracle Reports
 - □ Oracle Discoverer
 - OLAP Spreadsheet Addin
 - Enterprise Planning and Budgeting
 - □ BI Beans (create your own)



Oracle 9i RDBMS - MDDS





Oracle BI Road Map

©Vlamis Software Solutions, Inc.



What Does 9i OLAP Add?

- 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



How Do I Get Data In?

- Two storage options
 - □ Star Schema (relational)
 - □ AW (multidimensional, but stored in Oracle LOB)

Mapping a relational star schema

- □ Use OWB
- □ Use OEM
- Creating an AW
 - □ Create from relational star using OWB or AWM
 - □ Import from Express DB (OEO converter)
 - □ Hand code or use 3rd Party tools



Why OWB to Build ORACLE OLAP?

- Integrated with entire Oracle stack
- Graphically designs, generates, and deploys
- Only ETL tool that understands OLAP
- Uses PL/SQL for transformations
- Provides Life Cycle Management
- One-click deployment of OLAP AW

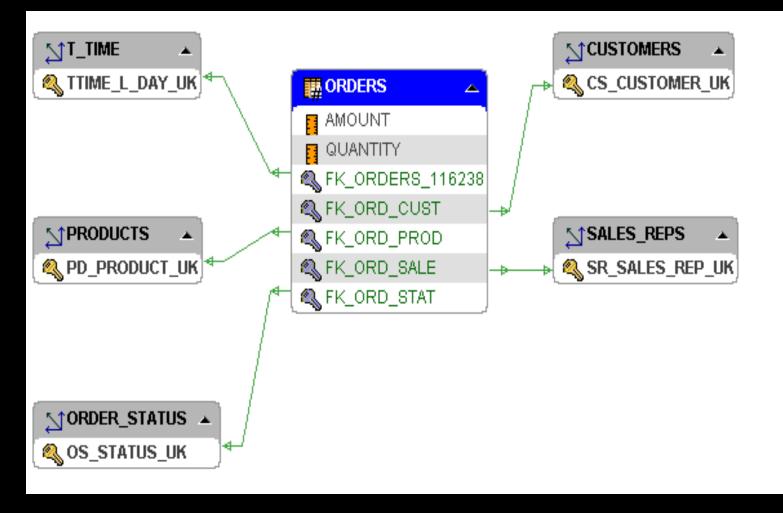


What is Oracle Warehouse Builder?

- Integrated Tool for Data Warehousing
- Based on Common Warehouse Metadata Standard (OMG)
- Supports Design and ETL Functions
- Enterprise Framework for Designing and Deploying Datawarehouses and Datamarts
- Integration platform for 9i OLAP

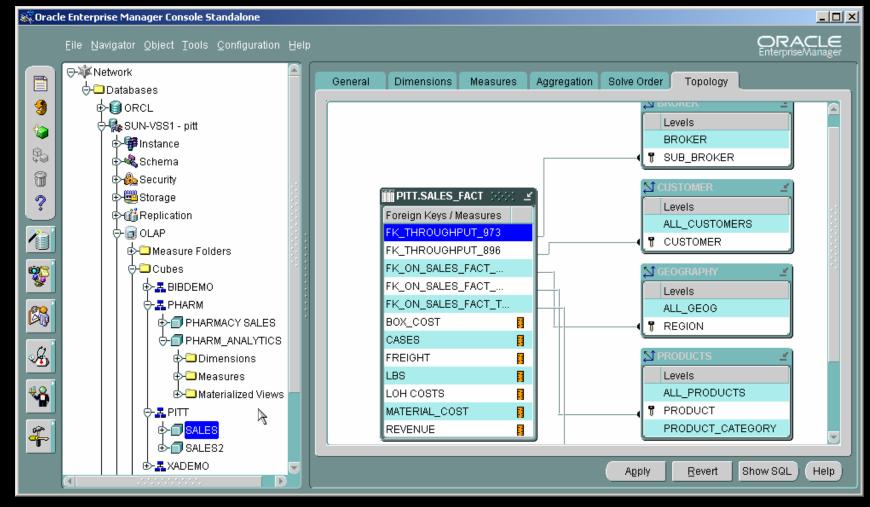


Finished Cube





OEM Cube Builder





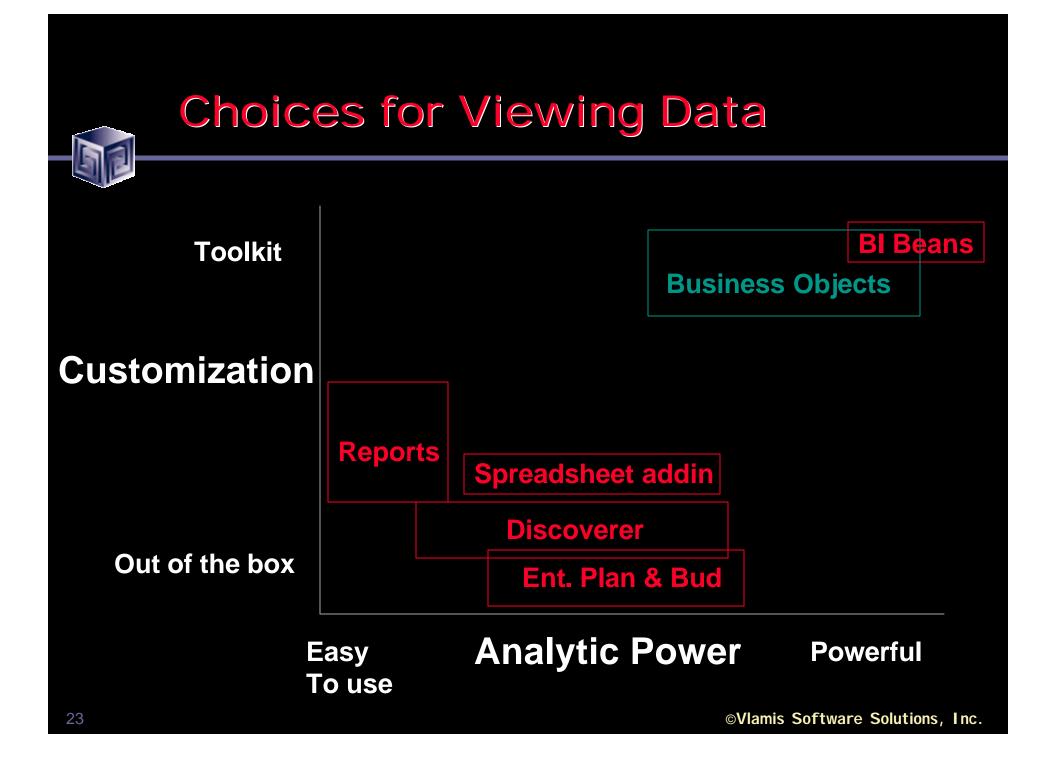
What Makes a DW OLAP-Ready?

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



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 can be in a portal and with web interface



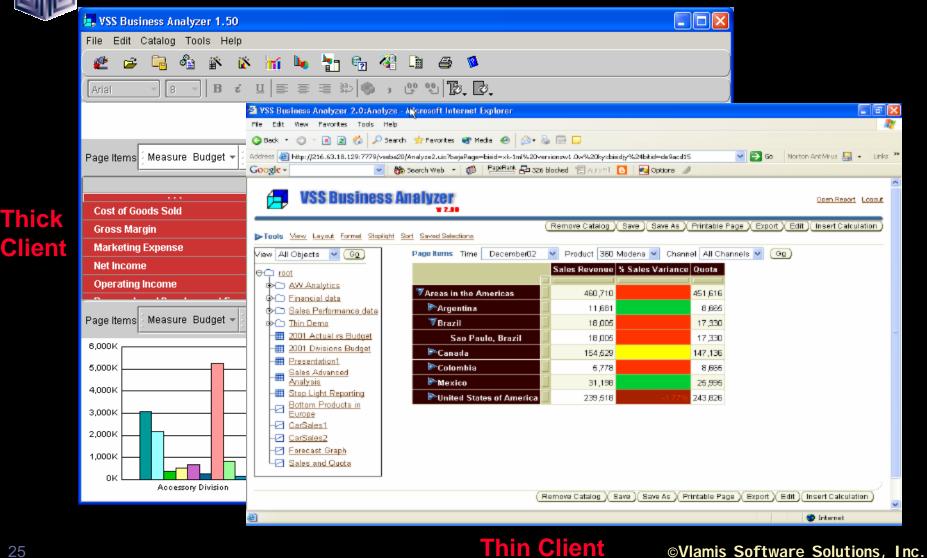


Custom BI Application





BI Beans Applications



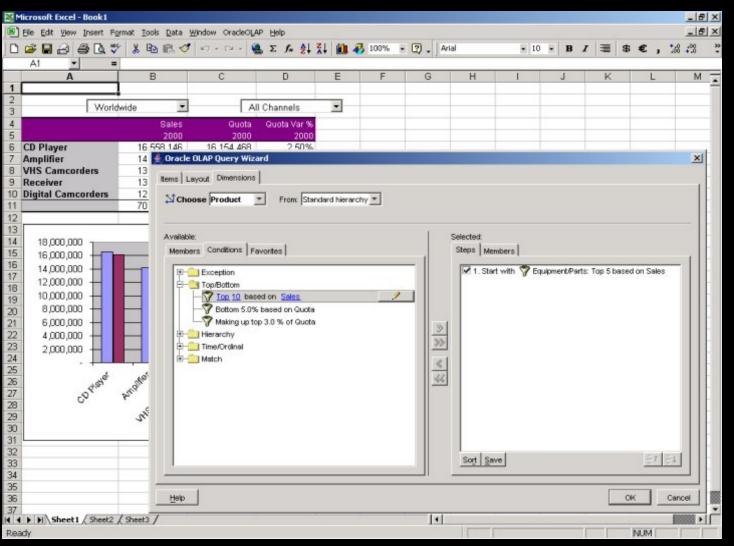


Discoverer 10g – or 'Discoverer for OLAP'

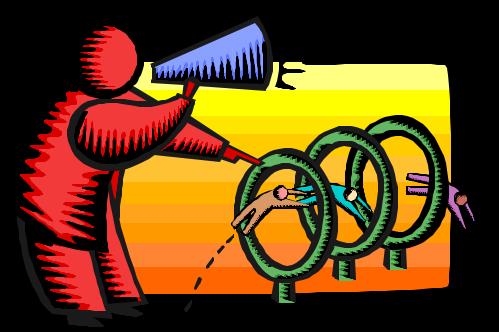
Image: Saved <td< th=""></td<>
Workshe Saved 🕦 2001 Actual vs Budget 🖆 🛪 🗙
2001 Actual vs Budget
Catalog by Division
Page Items Time 2001 -
⊕-Sales Performance dat
⊕-Thin Demo Accessory Division Audio Division Video Division
2001 Actual vs Budg
□ 2001 Divisions Bud Cost of Goods Sold 3,193,786 3,066,420 2,700,773 2,554,556 1,773,448 1,72(△
Log Bottom Products in Cost of Goods Sold 3,793,786 3,066,420 2,700,773 2,554,556 1,773,448 1,724 Log CarSales1 (1) Gross Margin 2,307,579 2,168,857 1,437,313 1,800,681 892,912 1,054
La CarSales2
Forecast Graph
Presentation1 Bottom Products in Europe 000000000000000000000000000000000000
Bales Advanced An: Page Items Time 2001 - Measure Sales -
Sales and Quota
Sales for Europe
Bottom Five Products
Cassette Tape MP3 Memory
VHS Video Tape
Minidisc Minidisc Retail
0K 20K 40K 60K 80K 100K 120K 140K
Connected



SpreadSheet Add-in



Demonstrations





Managing an OLAP Project

- Involve end-users early on
- Prototype, pilot, then phase 1
- Recruit "champion" users
- Lead from user community, not IT
- Develop in phases
- Provide value early on
- Keep it simple (at first)
- Need forum for users to share ideas
- Provide user guide with user's data

OLAP Implementation Suggestions

- Pick single first department
- Decide on set of terminology at beginning
- Use embedded-total objects
- Show instances in addition to "levels" in diagrams
- Prototype and design iteratively
- Pick small initial project. Deliver value quickly
- Involve users early on. Listen to feedback

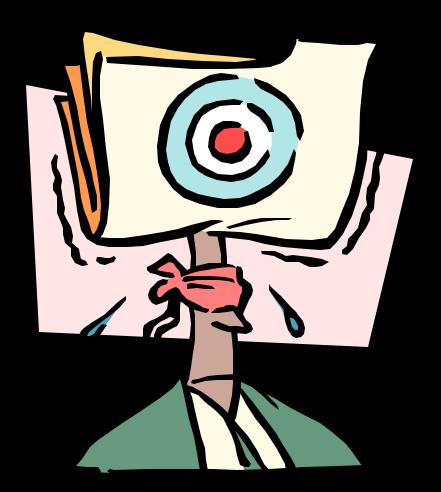


Conclusions

- Oracle complete solution simplifies deployment
- Oracle OLAP enhances calculation options
- OLAP integrated in RDBMS
- Evaluation OWB for building warehouses
- Discoverer for OLAP coming Q2, 2004
- Excel access to OLAP data coming soon
- Contact Oracle or Vlamis Software for more info

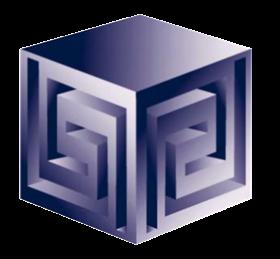


QUESTIONS?



Oracle's Business Intelligence Technologies

KCOUG 2003 Fall Conference October 27, 2003



Dan Vlamis dvlamis@vlamis.com Vlamis Software Solutions, Inc. http://www.vlamis.com

Copyright © 2003, Vlamis Software Solutions, Inc.