Oracle Business Intelligence & Spatial Views

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Principal Product Manager  
Mar 13 2008

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Program Agenda

- Introduction to Oracle BI
- Spatial Maps
- Demo
- Q & A
Oracle’s Enterprise Performance Management System

Financial Performance Management Applications

Operational BI Applications

Business Intelligence Foundation

Fusion Middleware

OLTP & ODS Systems
Data Warehouse Data Mart
Essbase
SAP, Oracle, Siebel, PeopleSoft, Custom
Excel XML
Business Process
Oracle BI Suite Enterprise Edition
Unified Business Intelligence Infrastructure

- Desktop Gadgets
- Ad-hoc Analysis
- Interactive Dashboards
- Search
- Reporting & Publishing
- Proactive Detection and Alerts
- Disconnected & Mobile Analytics
- MS Office & Outlook Integration

Common Enterprise Information Model
Integrated Security, User Management, Personalization
Multidimensional Calculation and Integration Engine
Intelligent Request Generation and Optimized Data Access Services

- OLTP & ODS Systems
- Data Warehouse
- Data Mart
- Essbase
- SAP, Oracle, PeopleSoft, Siebel, Custom Apps
- Files Excel
- XML
- Business Process
Oracle BI Server
Simplified, Powerful, Scalable Intelligence Across Sources

• Simplified business model view

• Advanced calculation & integration engine

• Intelligent request generation and optimized, distributed data access

• Mission critical scalability and performance

• Foundation for all OBIEE presentation services
Hot-Pluggable With Existing IT Investments

Portals
- Any JSR 168 Portal

Data Mining
- Oracle Data Mining, SPSS, SAS

Applications
- Oracle EBS, Siebel, SAP, PeopleSoft, JD Edwards

Desktop Tools
- Excel, Outlook, Lotus Notes

Oracle Enterprise Performance Management System
Oracle Business Intelligence Foundation

Security
- Oracle Kerberos, iPlanet, MSFT AD, Novell, Custom, Others

Data Access
- Oracle RDBMS, Oracle OLAP Option
- Microsoft SQL Server & Analysis Services
- IBM DB2, Teradata, Essbase, SAP BW
- XML, Excel, Text

Data Integration
- Oracle Data Integrator (Sunopsis)
- Oracle Warehouse Builder
- Informatica
- Ascential
- Others
## Most Complete Suite of Operational BI Applications

<table>
<thead>
<tr>
<th>Sales</th>
<th>Service &amp; Contact Center</th>
<th>Marketing</th>
<th>Order Management &amp; Fulfillment</th>
<th>Supply Chain</th>
<th>Financials</th>
<th>Human Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipeline Analysis</td>
<td>Churn Propensity</td>
<td>Campaign Scorecard</td>
<td>Order Linearity</td>
<td>Supplier Performance</td>
<td>A/R &amp; A/P Analysis</td>
<td>Employee Productivity</td>
</tr>
<tr>
<td>Triangulated Forecasting</td>
<td>Customer Satisfaction</td>
<td>Response Rates</td>
<td>Orders vs. Available Inventory</td>
<td>Spend Analysis</td>
<td>GL / Balance Sheet Analysis</td>
<td>Compensation Analysis</td>
</tr>
<tr>
<td>Sales Team Effectiveness</td>
<td>Resolution Rates</td>
<td>Product Propensity</td>
<td>Cycle Time Analysis</td>
<td>Procurement Cycle Times</td>
<td>Customer &amp; Product Profitability</td>
<td>HR Compliance Reporting</td>
</tr>
<tr>
<td>Up-sell / Cross-sell</td>
<td>Service Rep Effectiveness</td>
<td>Loyalty and Attrition</td>
<td>Backlog Analysis</td>
<td>Inventory Availability</td>
<td>P&amp;L Analysis</td>
<td>Workforce Profile</td>
</tr>
<tr>
<td>Cycle Time Analysis</td>
<td>Service Cost Analysis</td>
<td>Market Basket Analysis</td>
<td>Fulfillment Status</td>
<td>Employee Expenses</td>
<td>Expense Management</td>
<td>Turnover Trends</td>
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<tr>
<td>Lead Conversion</td>
<td>Service Trends</td>
<td>Campaign ROI</td>
<td>Customer Receivables</td>
<td>BOM Analysis</td>
<td>Cash Flow Analysis</td>
<td>Return on Human Capital</td>
</tr>
</tbody>
</table>

**Prebuilt adapters:** Oracle, PeopleSoft, Siebel, SAP

**Other Operational & Analytic Sources**

**Oracle BI Suite Enterprise Edition**
BI & SPATIAL INTEGRATION
BI & Spatial Integration

- BI 11g & Spatial Integration
  - What’s coming
- BI and Spatial Integration
  - What is possible today
- Spatial Data
  - NAVTEQ
  - Digital Globe
BI & Spatial Integration

- BI 11g & Spatial Integration
  - What’s coming

- BI and Spatial Integration
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- Spatial Data
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  - Digital Globe
BI & Spatial Views
Features At A Glance

• Maps as native BI views (like tables, charts, etc.)
• Info-windows displaying BI content with drilling
• Display multiple BI measures on maps
• Thematic, dot-density, bar, pie, or color shapes with intelligent binning and formatting options
• Schedule and distribute BI Map views via Delivers
• Print to HTML / PDF map views
• UI for mapping spatial themes to BI columns
BI & Spatial Integration

• BI 11g & Spatial Integration
  • What’s coming

• BI and Spatial Integration
  • What is possible today

• Spatial Data
  • NAVTEQ
  • Digital Globe
BI & Spatial

What Is Possible Today

• Over analytical on a map
  • Display color coded regions
  • Show point-based information

• Provide interactivity with other Dashboard elements
  • Dashboard prompts drive mapped content
  • Drilling and Navigation drive mapped content
  • Interactions with maps update other Dashboard content

• Show additional contextual information as mouseovers

• Drill to map detail
BI SPATIAL VIEWS
CURRENT INTEGRATION DEMO
### All Total Releases by Year and Region

<table>
<thead>
<tr>
<th>TRI Fac Region</th>
<th>Change from Prior Year</th>
</tr>
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<tbody>
<tr>
<td>8</td>
<td>-33.79%</td>
</tr>
<tr>
<td>4</td>
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</tr>
<tr>
<td>5</td>
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</tr>
<tr>
<td>9</td>
<td>-5.32%</td>
</tr>
<tr>
<td>3</td>
<td>-1.37%</td>
</tr>
<tr>
<td>2</td>
<td>0.18%</td>
</tr>
<tr>
<td>6</td>
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<tr>
<td>1</td>
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</table>

**Map of EPA Regions**

For Reporting Year: 2003

![Map of EPA Regions](image)

### All Total Releases by Year and Region Chart

![Chart](image)
Please select a year to filter the entire dashboard.

**Reporting Year**

2003

---

**Map of EPA Regions**
For Reporting Year: 2003

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**All Total Releases by Year and Region Chart**

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Public Safety Dashboard

Welcome, Administrator!

Filtered Map  Pin Map  Lasso Map  Crime Analysis Dashboard  Location Analysis  Person Search  Test Nav

Incidents within user defined box Go

Incidents within 0 ft of selected park Go Clear
### Complaint Detail

<table>
<thead>
<tr>
<th>Offense Desc</th>
<th>PD Desc</th>
<th>Date Key</th>
<th>Complaint Key</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>ASSAULT 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>18-Aug-02</td>
<td>164</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14-Mar-03</td>
<td>40138</td>
</tr>
<tr>
<td></td>
<td></td>
<td>09-Apr-03</td>
<td>10149 Vic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28-Oct-03</td>
<td>1143 Per</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28-Dec-03</td>
<td>31143 Per</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27-Sep-03</td>
<td>1119 Vic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23-Jan-04</td>
<td>2044</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27-Jan-04</td>
<td>11119 Vic</td>
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<td></td>
<td></td>
<td>23-Mar-04</td>
<td>32044</td>
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<td></td>
<td></td>
<td>23-May-04</td>
<td>12044</td>
</tr>
<tr>
<td></td>
<td><strong>ASSAULT 3 &amp; RELATED OFFENSES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
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<td><strong>MENACING,UNCLASSIFIED</strong></td>
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<tr>
<td>ASSAULT 3 &amp; RELATED OFFENSES</td>
<td>MENACING,UNCLASSIFIED</td>
<td>25-Dec-02</td>
<td>10183</td>
<td>Perp</td>
<td>NE</td>
</tr>
<tr>
<td>GRAND LARCENY OF MOTOR VEHICLE</td>
<td>LARCENY,GRAND OF AUTO</td>
<td>04-Aug-03</td>
<td>11175</td>
<td>Victim</td>
<td>LAR</td>
</tr>
<tr>
<td>HARRASSMENT 2</td>
<td>HARASSMENT,SUBD 1,CIVILIAN</td>
<td>15-Oct-03</td>
<td>11180</td>
<td>Perp</td>
<td>Reporter</td>
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<td></td>
<td>HARASSMENT,SUBD 3,4,5</td>
<td>17-Nov-03</td>
<td>1196</td>
<td>Perp</td>
<td>Victim</td>
</tr>
<tr>
<td>OFF. AGNST PUB ORD SENSBLTY &amp;</td>
<td>AGGRAVATED HARASSMENT 2</td>
<td>27-Oct-03</td>
<td>11183</td>
<td>Victim</td>
<td></td>
</tr>
<tr>
<td>OFFENSES AGAINST PUBLIC ADMINIST</td>
<td>CONTEMPT,CRIMINAL</td>
<td>02-Sep-02</td>
<td>30200</td>
<td>Victim</td>
<td>HARR</td>
</tr>
</tbody>
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<td>CONTEMPT, CRIMINAL</td>
<td>02-Sep-02</td>
<td>30200</td>
</tr>
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</table>
Integration Framework

BI EE and MapViewer

* NSDP (Non-Spatial Data Provider) key MapViewer integration feature

OGC WMS

MapViewer

NSDP*

OBIEE

Oracle Fusion Middleware

Other Oracle/non-Oracle databases, data warehouses …

Oracle Database
Location-enabled Oracle Platform

Oracle Siebel, JDE...

Oracle Fusion Middleware 11^g

Oracle Application Server 11^g

Oracle Database 11^g

CRM, ERP...

Business Intelligence, Portals ...

MapViewer

Locator  Spatial

Geospatial Web Services

Partner Technologies

Oracle core technology  Oracle location technology  Oracle location integration
Geospatial Data Management

- Locations (points of interest)
- Networks (roads, utilities)
- Polygons (admin & sales territories)
- Imagery (satellite imagery)
- Topology (map production)
- 3D data (city models)
BI & Spatial Integration

- BI 11g & Spatial Integration
  - What’s coming
- BI and Spatial Integration
  - What is possible today
- Spatial Data
  - NAVTEQ
  - Digital Globe
NAVTEQ Map Boundary Data Bundle
Available From OTN

- North America, Western Europe, Eastern Europe, Asia-Pacific, and Emerging Markets
  - Regional roads
  - Named places
  - Country, state, province, county, and city boundaries
Spatial Data

NAVTEQ

• Multiyear Agreement to incorporate boundary mapping data into Oracle® Database 10g and other Oracle products.
• With Oracle Database 11g, data for over 40 countries available.
• North America, Western Europe, Eastern Europe, Asia-Pacific, and Emerging Markets
  • Regional roads
  • Named places
  • Country, state, province, county, and city boundaries
• Data is supplied in Oracle’s native spatial data format: SDO_Geometry
NAVTEQ Boundary Data Samples
World Overview Map
NAVTEQ Boundary Data Samples
Country Boundaries
NAVTEQ Boundary Data Samples

Europe – Boundaries & Cities
NAVTEQ Boundary Data Samples

US State Boundaries
NAVTEQ Boundary Data Samples
County – San Diego county and cities
NAVTEQ Detailed Map Content
Compatible with BI and Oracle

Additional data available from NAVTEQ; not available from OTN
NAVTEQ Detailed Zip Code Content

Compatible with BI and Oracle

Additional data available from NAVTEQ; not available from OTN
NAVTEQ Detailed Telecom Map Content
Compatible with BI and Oracle

Additional data available from NAVTEQ; not available from OTN
NAVTEQ Detailed Parcel Map Content

Compatible with BI and Oracle

Additional data available from NAVTEQ; not available from OTN
NAVTEQ Detailed Census Map Content
Compatible with BI and Oracle

Additional data available from NAVTEQ; not available from OTN
NAVTEQ Detailed Census Map Content

Compatible with BI and Oracle
BI SPATIAL VIEWS
DIGITAL GLOBE
### All Total Releases by Year and Facility

<table>
<thead>
<tr>
<th>TRI Facility Id</th>
<th>TRI Facility Name</th>
<th>Change from Prior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>04073SFPROLROUTE</td>
<td>VISHAY SPRAGUE INC</td>
<td>-100.00%</td>
</tr>
<tr>
<td>04073XPINDOONRI</td>
<td>EXPANDED RUBBER PRODUCTS INC</td>
<td>-49.03%</td>
</tr>
<tr>
<td>03906PRTWROUTE</td>
<td>PRATT &amp; WHITNEY</td>
<td>18.26%</td>
</tr>
<tr>
<td>04079CYPNINDUS</td>
<td>CYRO INDUSTRIES</td>
<td>41.07%</td>
</tr>
<tr>
<td>03401PRMTNSULLI</td>
<td>PRIME TANNING CO INC</td>
<td>134.76%</td>
</tr>
<tr>
<td>03904PRTSMEAVE</td>
<td>U.S. NAVY PORTSMOUTH NAVAL SHIPYARD</td>
<td>61.0045%</td>
</tr>
</tbody>
</table>

### All Total Releases - Facility Detail

<table>
<thead>
<tr>
<th>TRI Facility Id</th>
<th>Reporting Year</th>
<th>Change from Prior Year</th>
<th>New All Totals</th>
<th>New All Totals Prior Year</th>
<th>Water Total Release</th>
<th>Water Total Release Prior Year</th>
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<tbody>
<tr>
<td>03904PRTSMEAVE</td>
<td>2004</td>
<td>-11.35%</td>
<td>11318</td>
<td>12776</td>
<td>8</td>
<td>0</td>
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<tr>
<td>03904PRTSMEAVE</td>
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<td>510949.00%</td>
<td>12776</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>03904PRTSMEAVE</td>
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<td>12</td>
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<td>0</td>
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<td>0</td>
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<tr>
<td>03904PRTSMEAVE</td>
<td>2000</td>
<td></td>
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<td></td>
<td></td>
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</tr>
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Spatial Data

DigitalGlobe

• Satellite and aerial imagery and related data
• Sample data available on OTN for download
  • http://www.oracle.com/technology/products/spatial/
  • Oracle Spatial formatted (GeoRaster) sample imagery of San Francisco
For More Information

search.oracle.com

business intelligence

or

oracle.com/bi
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