Introduction to Geospatial Visualization in Oracle Business Intelligence Enterprise Edition, 11g

Product Mgmt., Oracle Business Intelligence and Spatial
Agenda

• Introduction
• When are Map views useful
• Oracle Business Intelligence 11g
• Geospatial Visualizations
• Further Examples
Introduction

- Effective interactive visualization and analysis are key to insight
- The Oracle BI Suite offers numerous choices …
BI and Maps: A Natural Fit

- Maps are a natural choice for representing spatially-related data
- Help understand many phenomena and their relationships

More bars (red) or grocery stores (brown) per 10,000 people

Cholera incidents and possibly contaminated well

Map courtesy StrangeMaps, Wikipedia (John Snow)
Spatial is a Natural BI Component

IDC recognized BI sector.
Spatial Intelligence
New Depth and Breadth of Analysis

• Most BI data already contains geographic dimension of analysis
• Deliver deeper analytical insights through Spatial visualisation and data
• Increase the ROI of BI & GIS systems

In effect, Oracle is "flipping the switch" and turning spatial into a product feature when such a capability is needed. It will be daunting to compete against this company.

Microsoft, beware… we haven't heard much about geospatial and SQL Server integration lately… you are in danger of becoming a non-player. And IBM continues to play with ESRI only, and resists striking out on its own in what could be a missed opportunity.
Spatial Analytics Give a Real World Perspective
Most business data has a location

Find all competitors within 2 miles of Northport Branch

```
SELECT c.holding_company, c.location, bank b
FROM competitor c,
WHERE b.site_id = 1604
AND SDO_WITHIN_DISTANCE(c.location, b.location, 'distance=2 unit=mile') = 'TRUE'
```
Map driven filters, or prompts, in BI dashboards
Only Possible With Spatial Analytics

Show incidents within 750 ft of selected park

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When are Map views useful

• Visualizing data related to geographic locations.
• Showing or detecting spatial relationships and patterns.
• Showing lots of data in a relatively small area.
• Drilling down from a (map) overview to a detailed report, chart, or graph.
Why Spatial Map Visualizations?
The Original High-Density Visualization
Why Spatial Map Visualizations?

Custom Territories
Why Spatial Map Visualizations?
Ideal For Master-Detail Analysis
Oracle Business Intelligence Enterprise Edition 11g
Oracle Business Intelligence
Complete, Open, Integrated

Common Enterprise Information Model

- Common Metadata Foundation across all Data Sources
- Common Security, Access Control, Authorization, Auditing
- Common Request Generation and Optimized Data Access Services
- Common Clustering, Workload Management, & Deployment
- Common Systems & Operational Lifecycle Management

OLTP & ODS Systems
Data Warehouse
Data Mart
Exadata
OLAP Sources
Packaged Applications (Oracle, SAP, Others)
Unstructured & Semi-Structured
Excel XML/Office
Business Process
Part of Oracle Fusion Middleware

- Applications
- Middleware
- Database
- Infrastructure & Management

Development Tools

- User Interaction
- Enterprise Performance Management
- Business Intelligence
- Content Management
- SOA & Process Management
- Identity Management
- Application Grid
Oracle BI 11g New Interactive Visualizations
Gain Insight Quicker with Greater Visibility

- Rich interactive visualizations
- Animated transitions
- Range sliders
- Paging sliders
- Master-Detail linking
- Extensive and extended set of chart types
- Consistent, hi-fidelity charting across Oracle product line
Unified End User Experience
Complete. Consistent. Accurate.
Spatial Visualization in Oracle BI 11g

Gain new understanding of customers and markets

Spatial Integration and Mapping

- Interactive Map Controls
- Global digital Map data provided by NAVTEQ
- Extensive Mapping Visualizations
- Seamless Dashboard integration
- Built with Enterprise Semantic model
Known as Map Views in Oracle BIEE 11g
Spatial Visualization: Map views in OBIEE 11g
For Example: Business Data

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And Resulting Analysis

Spend
Country

Buyers
Year

Interactive Visualizations

Invoiced Quantity Year

Buyers, Suppliers Year

Buyers, Suppliers Spending Type

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Oracle BI Enterprise Edition & Location Integration
Map views: Thematic Map-based Visualizations

- Thematic Mapping in OBIEE 11g
- First-class view in Answers
  - Point-and-click interface
    - Creation of Map Views
    - Interactions are UI-driven
  - State management
    - Dashboard Prompts
    - Print & Export
    - Agents
  - Integration with Presentation Server stack
  - Oracle Fusion Middleware MapViewer
Oracle BI Enterprise Edition & Location Integration
Map views: Thematic Map-based Visualizations

- Support for thematic overlays
- Master-detail linking
- Map Metadata Management
  - Via Presentation Server Administration
More examples
Performance metrics on map, chart, and table views
Drilling and multiple measures on a map
A dashboard page can have multiple map views
The background map itself can be a thematic map.
Summary: OBIEE 11g Map view feature

- New view type in 11g
- Supports common use cases
- And interactions: drilling, master-detail linking
SOFTWARE. HARDWARE. COMPLETE.