Map Visualization in Analytic Applications

David Lapp, Product Manager, Spatial & Graph
Oracle
Analytics styles

Cloud platform

Big Data Analytics
Noisy, semi-structured data
Explore, enrich
Signal in the noise

Ad hoc Visualization
End user data
Blend with enterprise data
Drag and drop canvas

Enterprise Business Intelligence
Curated enterprise data
Dashboards, reports, scorecards
Enterprise KPIs

On premises
Analytics essentials

**Self service  analyst to exec**

- **Big Data Analytics**
  - Noisy, semi-structured data
  - Explore, enrich
  - Signal in the noise

- **Ad hoc Visualization**
  - End user data
  - Blend with enterprise data
  - Drag and drop canvas

- **Enterprise Business Intelligence**
  - Curated enterprise data
  - Dashboards, reports, scorecards
  - Enterprise KPIs

**Embedded geospatial  prep to insight**
Big Data Analytics

Scenarios
Cyber threat detection (system logs)
Marketing trends (social media)
Asset management (sensors, IoT)

Oracle Big Data Discovery
Explore, Transform, Discover

Oracle Big Data Spatial & Graph
Harmonize, Categorize, Analyze, Visualize

✓ Integrated Spatial Visualization
✓ In Cloud
✓ On premises

Big Data Platform
Hadoop
NoSQL
MapReduce
Spark
Big Data Discovery

Explore ▼ Transform ▼ Discover ▼

Social: social_users

Add attributes to visualize relationships

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<thead>
<tr>
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<th>12</th>
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<tbody>
<tr>
<td>Records</td>
<td>Filtered Records</td>
<td>Attributes</td>
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</tbody>
</table>

All Attributes

- followers_count
- friends_count
- latitude
- location
- uid
- user_geocode
- user_geocode_geo_city
- user_geocode_geo_county
- United States
- Russia
- China
- Brazil
- Canada
- India
- 3494 others

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<td>RT @Oboynesto: Reconstruc...</td>
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</table>

- **Transform**
  - Extract Entities
  - Create Geographic Hierarchy

- Other options shown include:
  - String
  - Convert to...
  - Delete Attribute
  - Enrichment
  - Transformation Editor
  - Tag from Whitelist

- Options for sorting and filtering:
  - Sort
  - Favorite
  - Hide
Ad hoc Visualization

Scenarios
HR (upload recruits)
Finance (upload budget targets)
Sales (upload forecasts)
Blend with enterprise data

Oracle Data Visualization
Load, Combine, Visualize

✓ Integrated Spatial Visualization
✓ In Cloud
✓ On premises
Enterprise Business Intelligence

Scenarios
Gov’t agency (fiscal transparency)
Business enterprise (performance monitoring)
Open Data (governed, provenance, meets regulations)

Oracle Business Intelligence
Enterprise Information Model
Analyze, Report, Visualize, Notify

✓ Integrated Spatial Visualization
✓ In Cloud
✓ On premises
MapViewer themes
Oracle BI Model
Map-enable dimensions
Automatic mapping

BI Associations
Associate map layers to BI columns to enable their display on maps.

Layer Key: CUSTOMER_NAME
BI Key Delimiter: 
Geometry Type: Point

BI Key Columns

<table>
<thead>
<tr>
<th>BI Key</th>
<th>Subject Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>“C1 Customer Name”</td>
<td>“A - Sample Sales”</td>
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</tbody>
</table>

Sample Data:
Summary

• Big data, ad hoc, curated enterprise BI
• Cloud, on prem, hybrid
• Self service from analyst to exec
• Geospatial embedded from prep to insight