



Map Visualization in Analytic Applications

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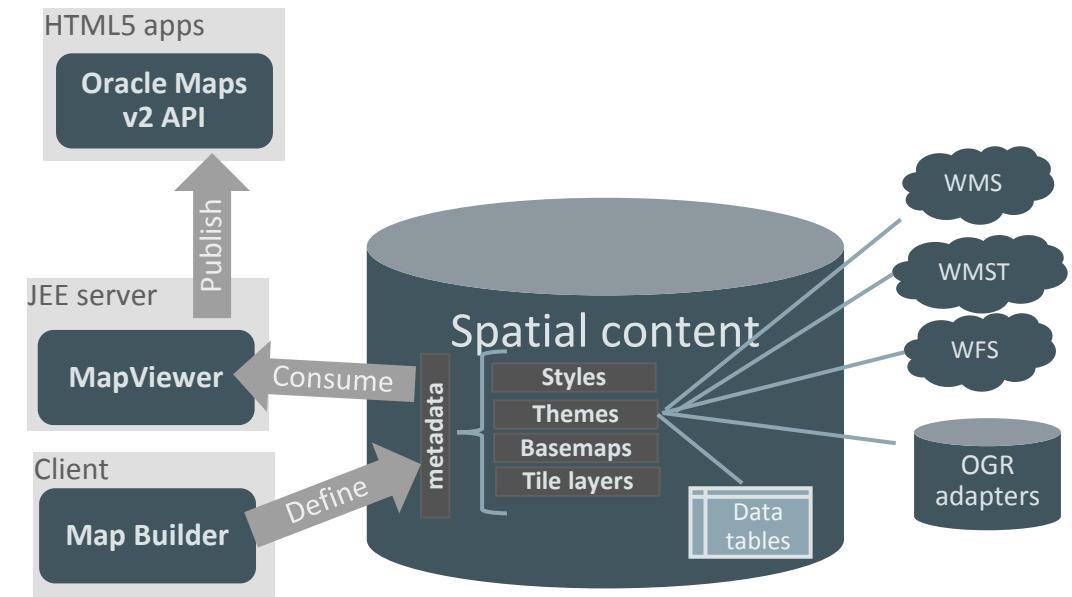
Agenda

- Overview
- Use Cases
- New Features
- Demos
- Discussion

Technical Overview

Oracle MapViewer

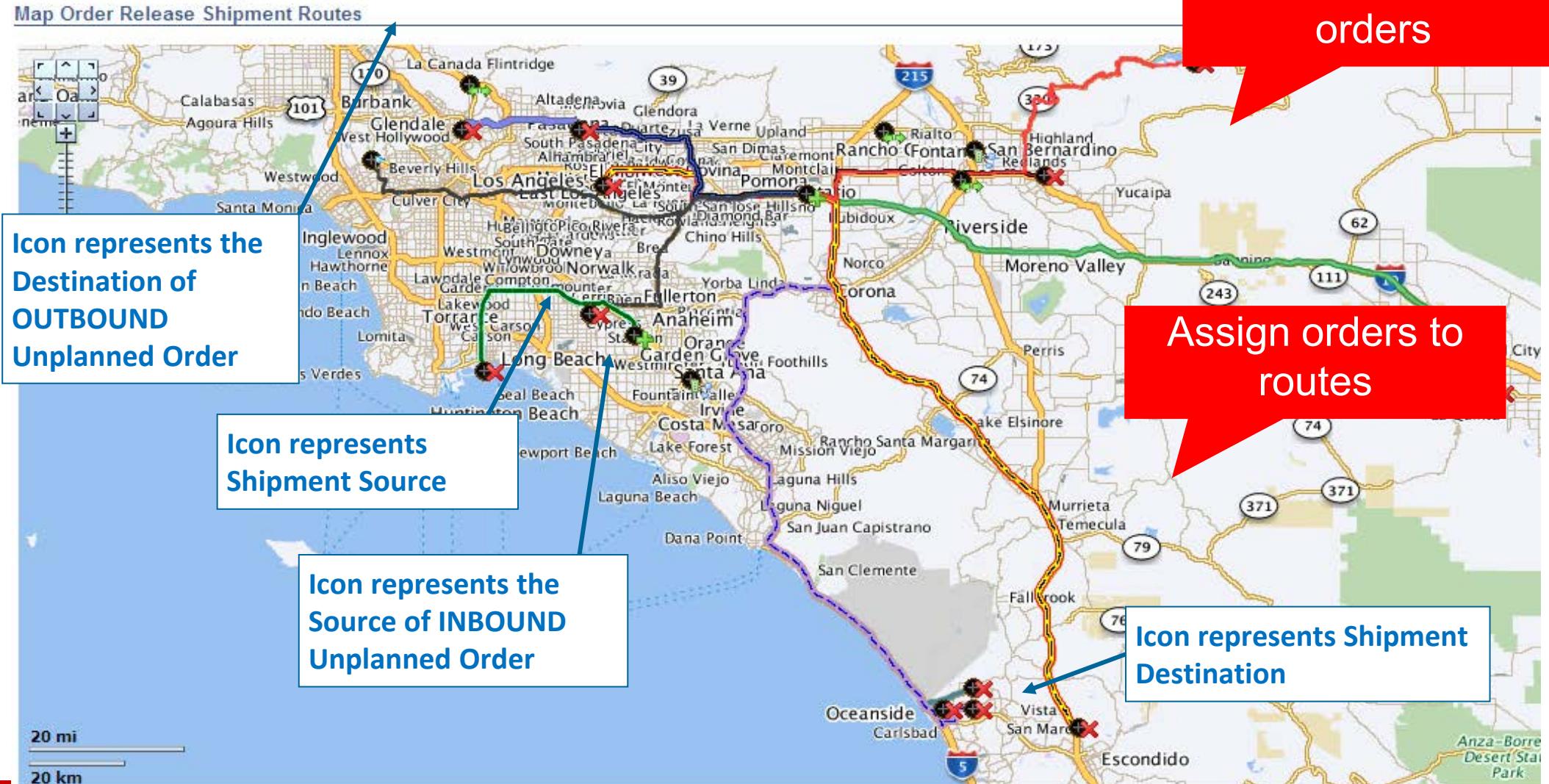
- Toolkit consisting of server and client JEE and Javascript components for incorporating interactive maps and spatial analysis in browser-based applications
- Included in various Oracle products and apps
- Javascript APIs (AJAX, HTML5) aka “Oracle Maps”
- HTML5 API aka “Oracle Maps V2 API”
- Oracle Maps V2 API provides
 - Rich map visualization and spatial analytics in business apps
 - Highly interactive user experience
 - Mobile support



How is Oracle MapViewer Used?

Usage Examples

Fleet Management: Route Visualization

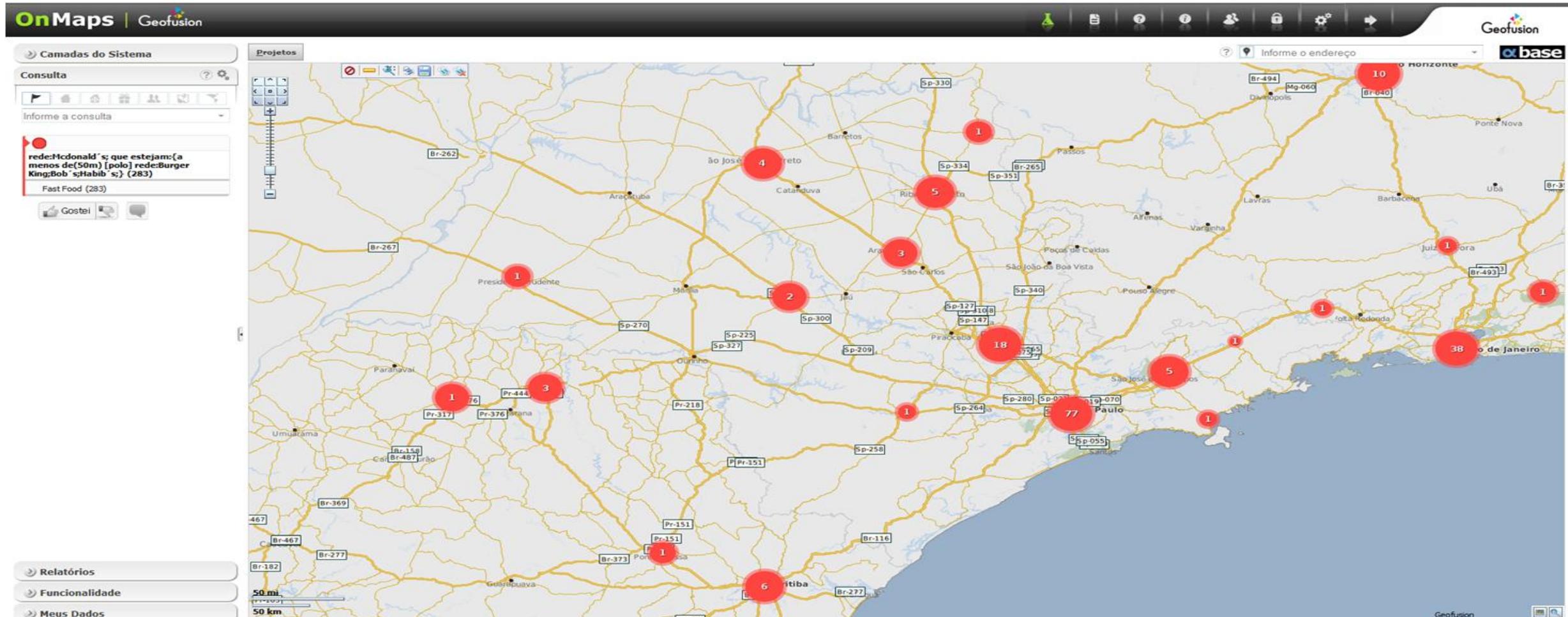


Location Services: Current Traffic



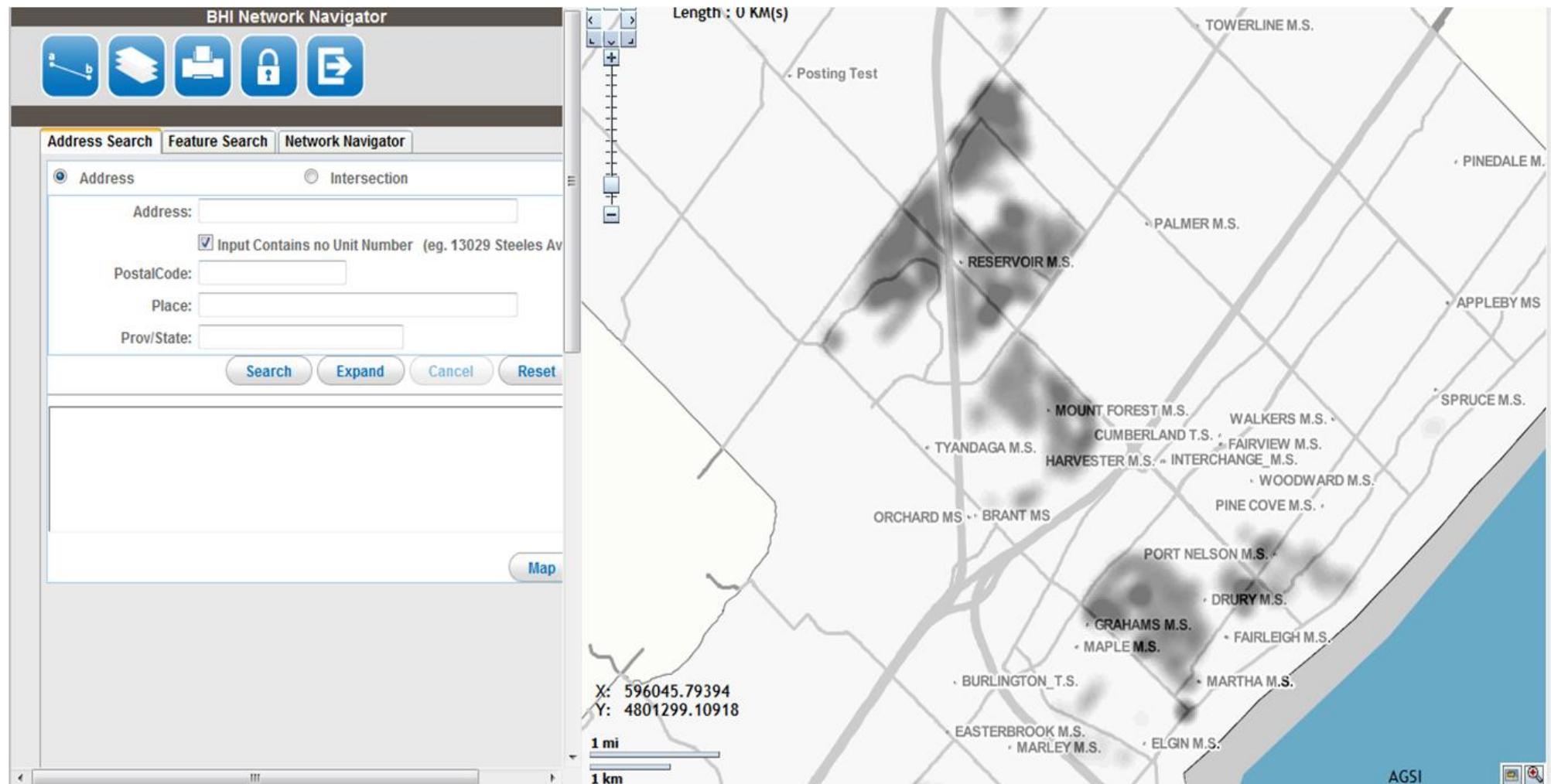
Slide courtesy LocationBox (InfoTech Turkey)

Retail Analytics: Autoclustering of Store Locations



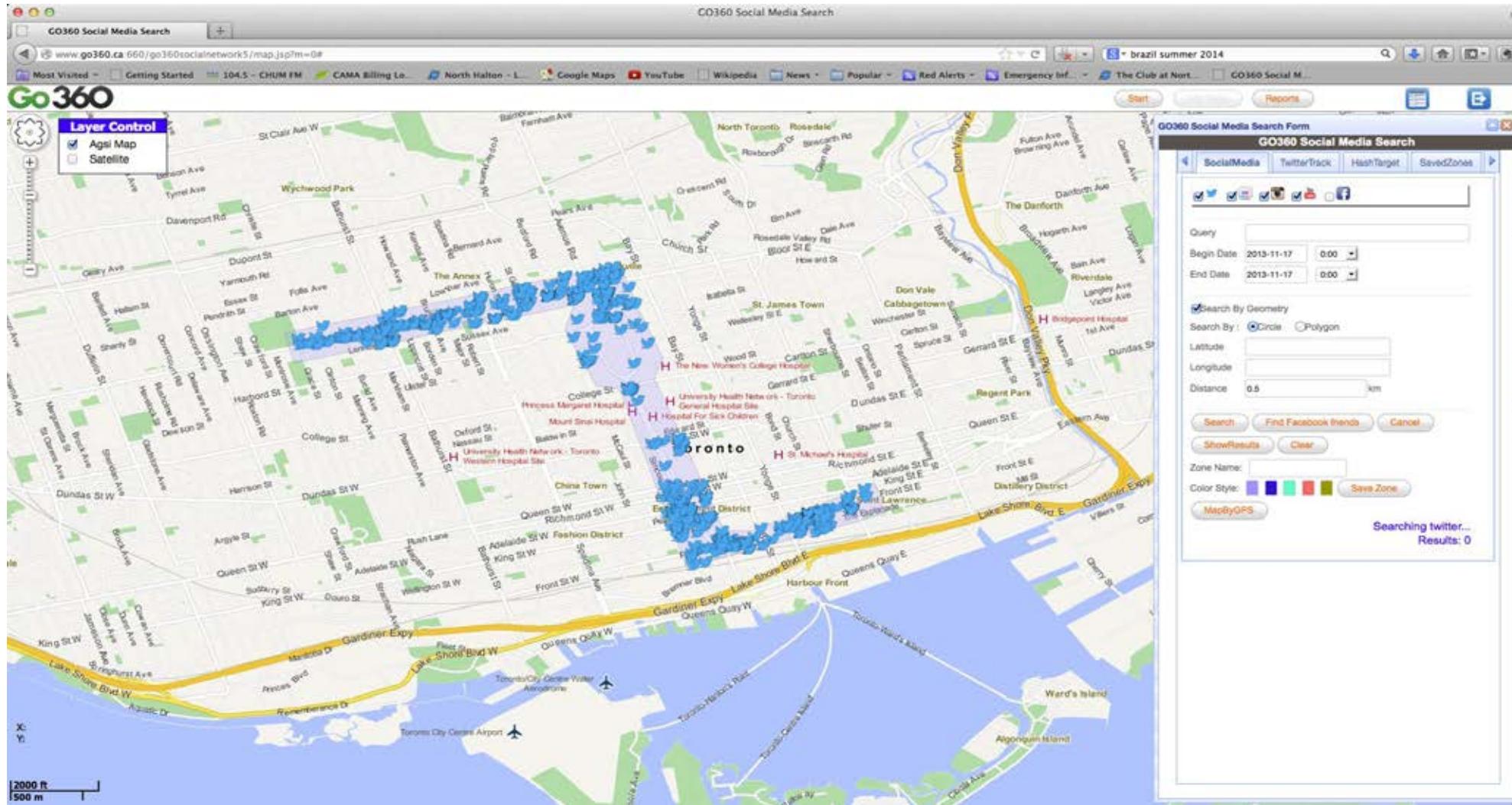
Slide courtesy GeoFusion

Electric Utility: Localities Affected by Outages



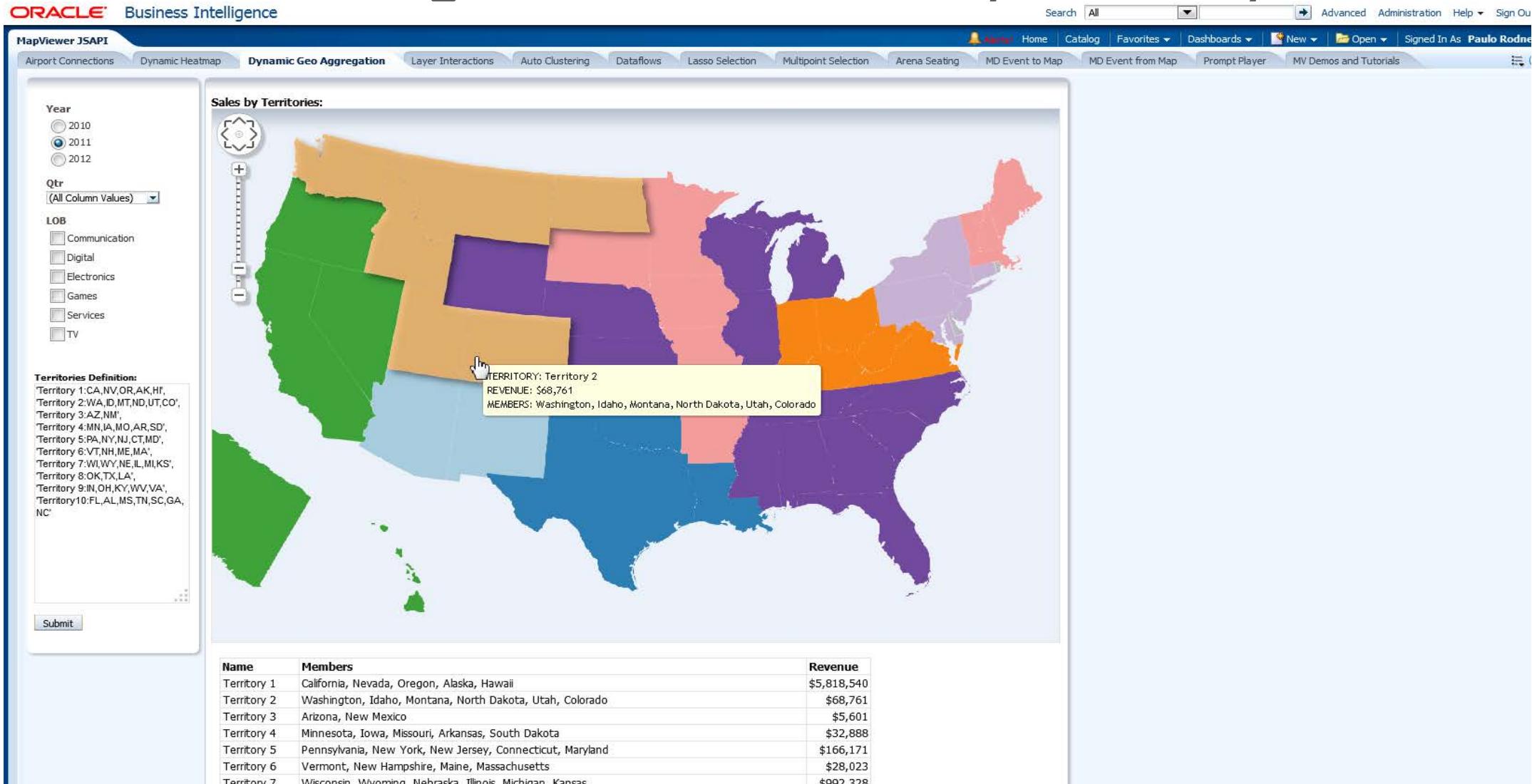
Slide courtesy AGSI

Law Enforcement: Social Media



Slide courtesy AGSI

Business Intelligence: Sales Data by Territory



Business Intelligence: Flight Delay Performance

ORACLE Business Intelligence

MapViewer JSAPI

Airport Connections Dynamic Heatmap Dynamic Geo Aggregation Layer Interactions Auto Clustering Dataflows Lasso Selection Multipoint Selection Arena Seating MD Event to Map MD Event from Map Prompt Player MV Demos and Tutorials

Search All Advanced Administration Help Sign Out

Alerts Home Catalog Favorites Dashboards New Open Signed In As Paulo Rodney

Map showing flight connections from Salt Lake City International (SLC) to various US and Canadian airports. The map highlights direct flights originating from SLC. A callout box indicates "Airport: Salt Lake City International, Outbound direct flights: 114".

State # of Flights Delay Perf %

California	709011	8.14
Texas	693107	8.48
Florida	435134	8.18
Georgia	420629	11.80
Illinois	405112	10.34
New York	284256	9.97
Colorado	267327	6.98
Arizona	207236	5.65
North Carolina	195324	9.15
Michigan	192943	11.53
Nevada	165995	6.35
Tennessee	152057	10.33
Pennsylvania	135371	8.54
Minnesota	134689	8.99
Utah	125921	7.58
Virginia	117496	9.29
Missouri	115729	9.70
Washington	111753	4.54
New Jersey	109323	10.79
Massachusetts	109292	9.66
Ohio	108539	10.90

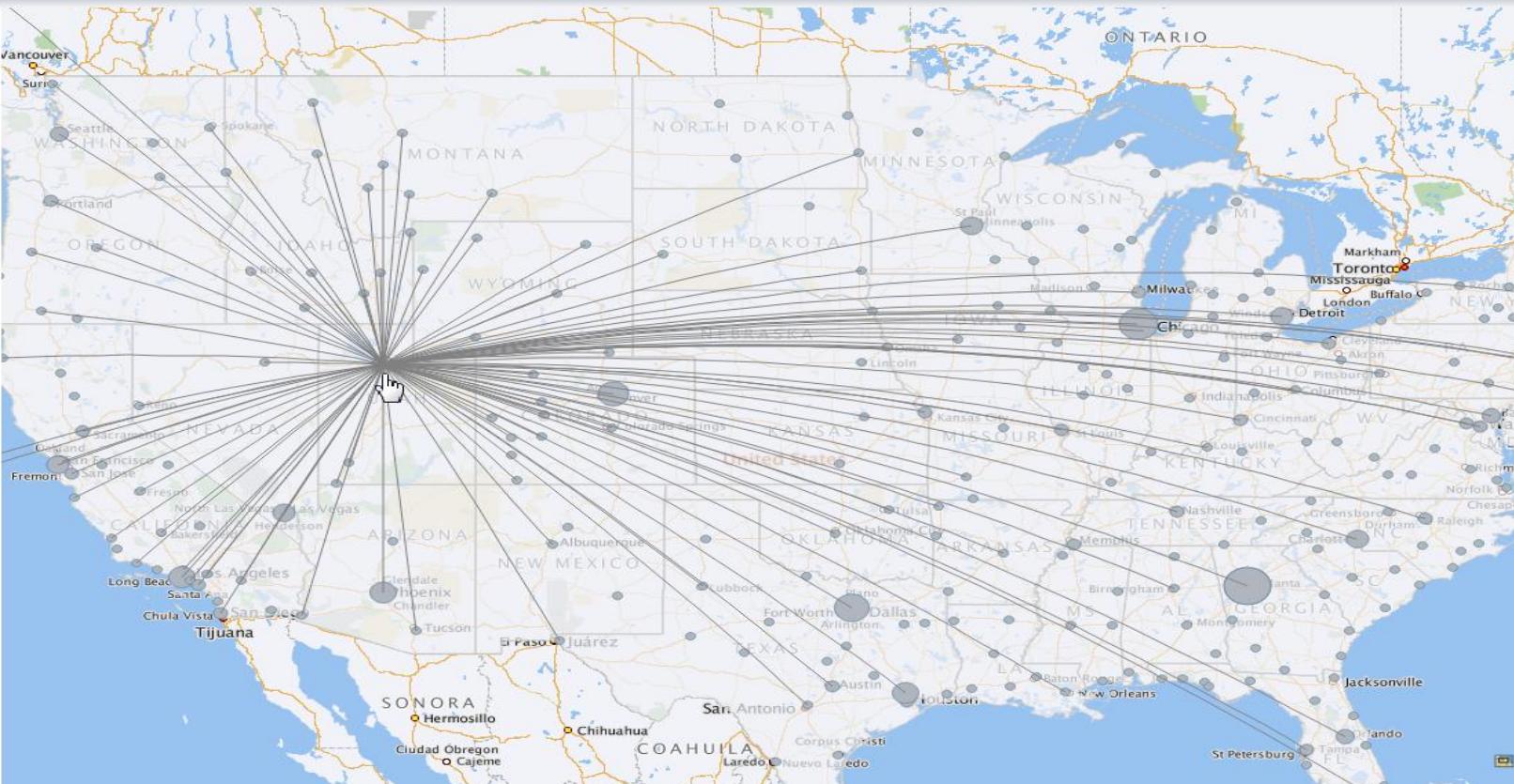
State: Utah

Cedar City Regional

Salt Lake City International

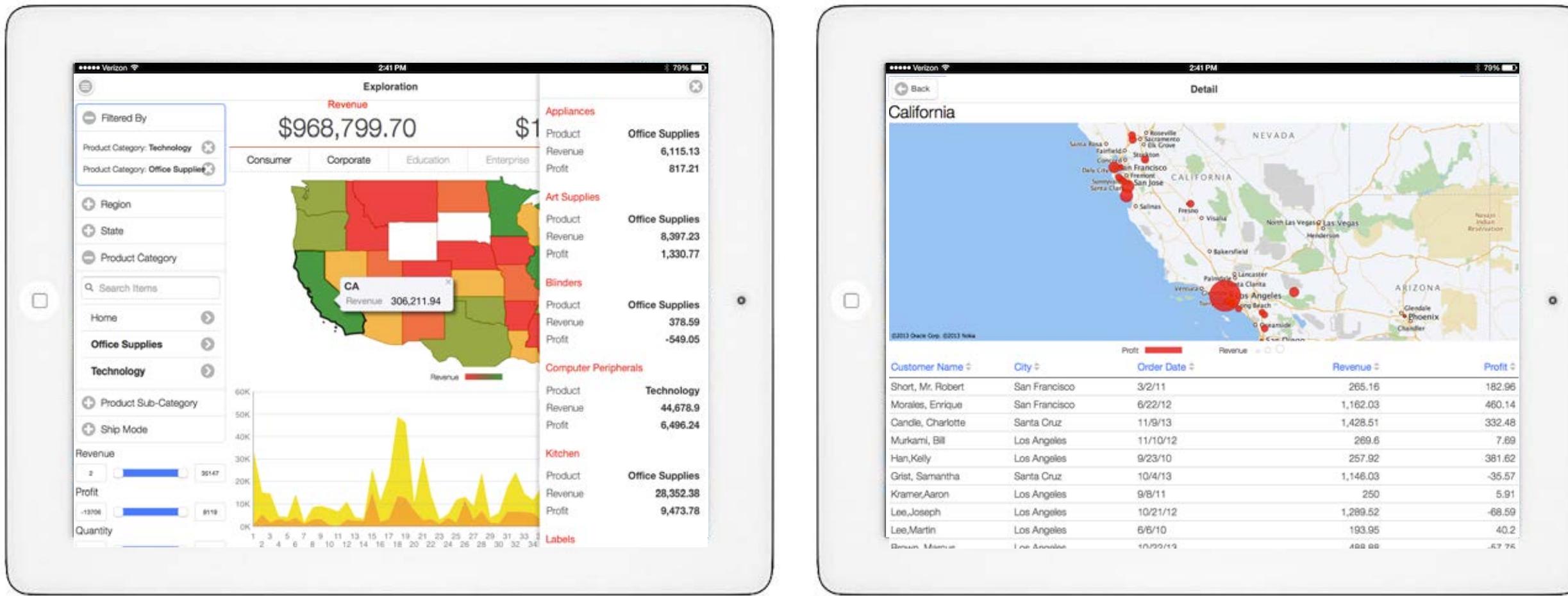
St George Municipal

Delay Performance: 0% 2% 4% 6% 8% 10% 12% 14%



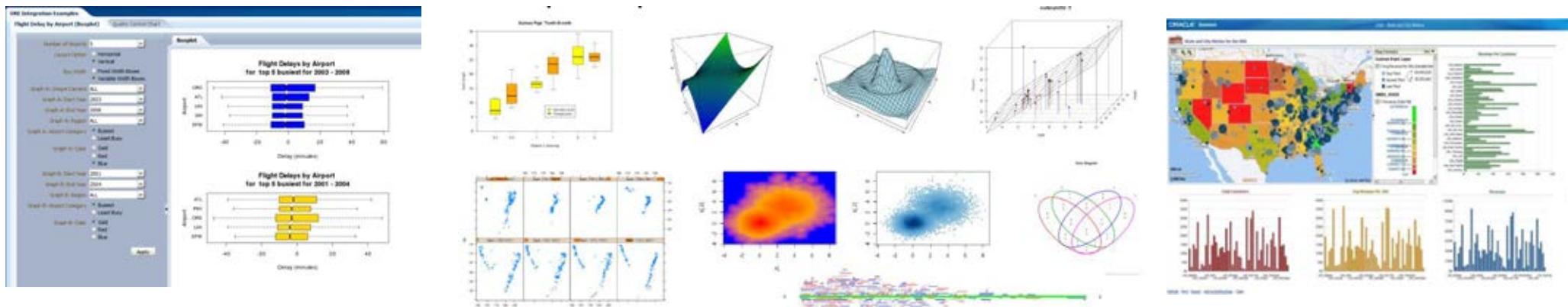
Business Intelligence: Stadium Floor Plan

BI Mobile: Revenue by State / Revenue by Customer

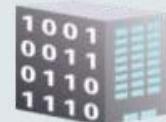
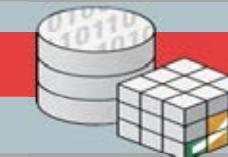


OBIEE with Advanced and Spatial Analytics

Predictive, Statistical, Forecast, Geospatial, Location-based



OBIEE Common Enterprise Information Model



Spatial & Graph

Advanced Analytics

Oracle Database



OBIEE with Spatial Analytics - Scenarios

Scenario 1: Column in an analysis based on *Spatial function*

Example: Analysis results include `Crash_ID,Distance_To_Nearest_School,...`

Approach: Define location-based column using `EVALUATE()` function to ship query to Spatial

Scenario 2: Data source in OBIEE model based on *Spatial query*

Example: OBIEE model includes location-based source `Accidents_Near_Intersection`

Approach: Define data source as view accepting variables from dashboard via prompts (i.e. Intersection, Distance)

Scenario 3: *Spatial query* within OBIEE dashboard, not tied to OBIEE model

Example: Select all crashes within user defined distance of an address

Approach: Define query using “Create Direct Database Request” feature with references to variables via prompts

Scenario 4: Analyses based on *interactive lasso selection of crashes based in map*

Example: User draws shape in map to filter crashes for diverse analyses in dashboard

Approach: Custom configuration using MapViewer HTML5 API per SampleApp example

New Features

- Deployment Options
- Dynamic Tile Layers
- Style Enhancements
- Catalog (file based) Data Sources
- Offline/Local Tile Stores
- Map Cache Auto-Update
- Interface for Supporting 3rd Party Providers
- Enhanced GeoRaster Support

Demonstrations

The Spatial and Graph SIG

- The SIG promotes interaction and communication that can drive the market for spatial technology and data
- Members connect and exchange knowledge via online communities and at annual conferences and events

- Meet us at the Summit
 - Morning Receptions
 - Tuesday and Wednesday / 7:45 to 8:30 a.m. / Registration Area
 - Birds of a Feather Session
 - Wednesday / 12 to 1 p.m. / Auditorium – Look for “Spatial and Graph SIG” table
- Join us online
 - [LinkedIn](#) (search for “LinkedIn Oracle Spatial”)
 - [Google+](#) (search for “Google+ Oracle Spatial”)
 - [IOUG SIG](#) (sign up for free membership through www.ioug.org)
 - [OTN Spatial – Communities](#) (search for “Oracle Spatial and Graph Community”)
- Contact the Board at oraclespatialsig@gmail.com

Resources

- Oracle Technology Network:
www.oracle.com/technetwork/database/options/spatialandgraph
www.oracle.com/database/big-data-spatial-and-graph
- [blogs.oracle.com oraclespatial](http://blogs.oracle.com/oraclespatial) [oracle_maps_blog](http://blogs.oracle.com/oracle_maps_blog)
[bigdataspatialgraph](http://blogs.oracle.com/bigdataspatialgraph)



Resources on Big Data Spatial and Graph

- Oracle Big Data Spatial and Graph on Oracle.com:
<https://www.oracle.com/database/big-data-spatial-and-graph>
- OTN product page (trial software downloads, documentation):
<http://www.oracle.com/technetwork/database/database-technologies/bigdata-spatialandgraph>
- Blog (technical examples and tips):
<https://blogs.oracle.com/bigdataspatialgraph/>
- Big Data Lite Virtual Machine (a free sandbox environment to get started):
<http://www.oracle.com/technetwork/database/bigdata-appliance/oracle-bigdatalite-2104726.html>

