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# Xavier Lopez

Senior Director, Spatial and Graph Technologies



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# Spatial and Graph Excellence Awards

- Integrated Enterprise
- Innovator
- Partnership
- Education and Research



# **Spatial and Graph**

# **EXCELLENCE**

## **2013 Integrated Enterprise Awards**



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# Northeast Utilities eGIS

## Oracle Spatial and Graph: Operational Efficiency through Integration



### Objectives

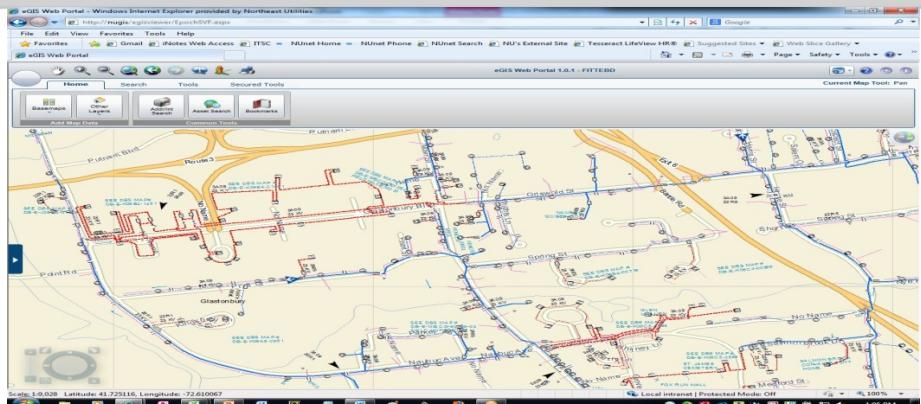
- Decrease operational cost by unifying GIS systems and synchronizing data
- Improve response to customer outages
- Create self-serve environment

### Solution

- Uses Spatial and Graph to integrate GE Smallworld GIS data and custom apps
- Stores electrical data in a Network Data Model graph
- Web services increase access of GIS data to more users

“Oracle Spatial and Graph has given us the ability to bring GIS to the masses in an easy-to-use, fast, and economical way,”

Brian Fitterman  
Solutions Architect, Northeast Utilities



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# Water Resources Information Center, MWR, China

## Oracle Spatial and Graph: Water Resource Management

### Objectives

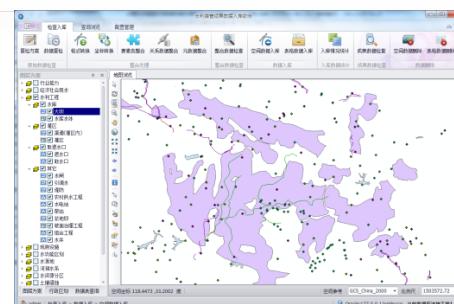
- 30% performance improvement for spatial queries
- Integrate disparate data sets

### Solution

- Uses spatial and graph analytics to manage over 3,000 water resource organizations
- Includes rich geo-referenced imagery
- Optimizes usage of water resources via the Network Data Model graph

### Benefits

- 40% performance increase for spatial queries
- Consolidation of raster, vector, and network data in 20 TB central repository
- Accurate data in a consistent format



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# **Spatial and Graph**

# **EXCELLENCE**

## **2013 Innovator Awards**



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# ÖBB-Infrastruktur AG, R & D

## Oracle Spatial and Graph: Railway Network Management



### Objectives

- Optimize railway planning, construction and maintenance
- Enable efficient routing of railway lines

### Solution

- Stores and processes more than 8 billion points of objects along railway tracks
- Provides fast and cost-efficient information about railway tracks
- Enables LiDAR data to be viewed with existing infrastructure vector data
- Simplifies processing of all spatial data

“[This technology...] is indispensable to process geospatial data with high efficiency at low cost,”  
Dr. Michaela Haberler-Weber  
ÖBB-Infrastruktur AG, R & D



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## Oracle Spatial and Graph: Locomotive Tonnage

### Objectives

- Automate electric grid operations
- Monitor performance of grid components

### Solution

- Processes over 3 million train location points per day
- Optimizes train routing solutions via the load-on-demand NDM graph
- Provides dynamic segmentation of events on the rail network using LRS

### Benefits

- Improved electric grid reliability and efficiency
- Creates “actionable intelligence” from real-time and historic data on utility network
- Feeders automated and monitored for power flow, outages and asset device health

Train Profile		Total Facility Tonnage Change																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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# **Spatial and Graph EXCELLENCE 2013 Partnership Awards**

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# CDS – CVA Geo

## Oracle Spatial and Graph: Consolidation at National Agencies



### Objectives

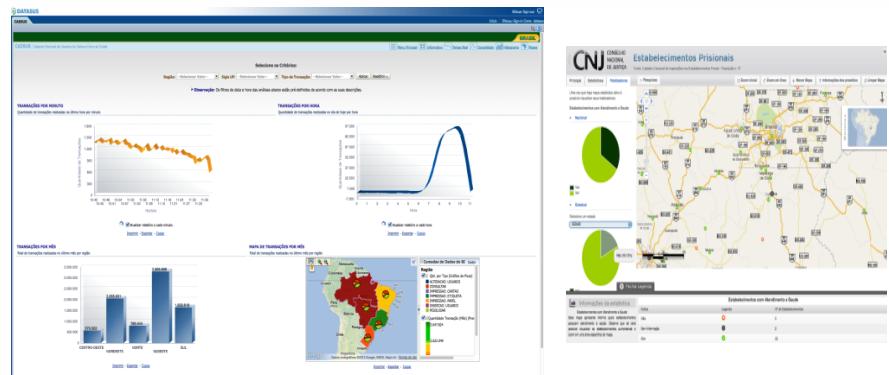
- Consolidate geospatial data, improve business intelligence, offer interactive maps and location intelligence to national agencies within Brazil

### Solution

- Provide large-scale, highly available, and secure location-enabled systems
- Visualize data in OBIEE and MapViewer
- Increase access to data via web services
- Provide integrated solutions (Oracle SOA, BPM, Spatial and Graph, BI)

### Benefits

- Operational cost savings
- Many more users can quickly access data
- Dynamic maps aid decision-making



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### Objectives

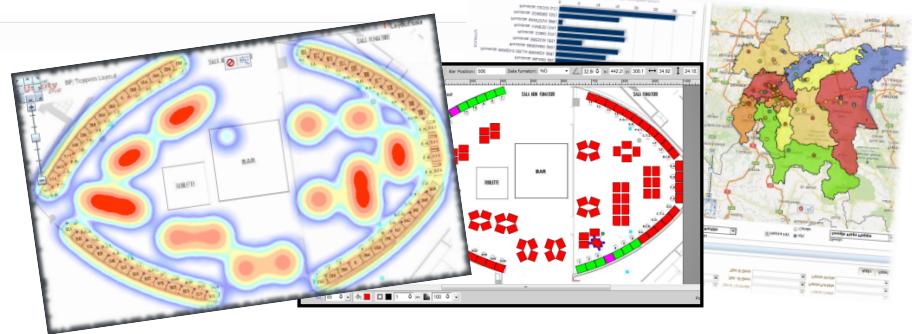
- Efficiently analyze and support change management of individual gaming machines on a country-wide level

### Solution

- Uses spatial and graph analytics to manage floor layout and machine performance
- Visualizes data using MapViewer and OBIEE
- Integrates disparate data sets for single source of truth

### Benefits

- Ability to analyze historical performance of every gaming machine
- Automation of reporting saves time
- Reduced operations cost
- Increased number of users served



# Think Huddle

## Oracle Spatial and Graph: “Custom Maps in a Box”

Think Huddle

### Objective

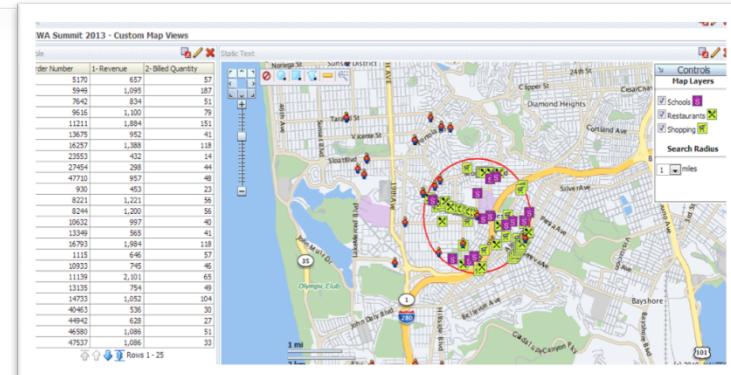
- Develop highly interactive maps within OBIEE that require only minimal customization for each implementation

### Solution

- Developed a proven, repeatable method for using MapViewer to join external data with data stored within OBIEE
- Relies on a custom static text block
- Joins tabular data with spatial data in the database; requires minimal customization for each use

### Benefits

- Allows any MapViewer style to be used; enables any custom interaction to be created
- Reduces development and maintenance time



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# **Spatial and Graph EXCELLENCE**

## **2013 Education and Research Awards**

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# IMSC - USC Viterbi School of Engineering

## Oracle Spatial and Graph: Transportation Networks

### Objective

- Work with LA Metro Transportation Authority to optimize transportation networks

### Solution

- Route planning solution considers current traffic and forecasts future behavior
- Enables dynamic, real-time and historical data querying
- Transforms Big Data into actionable insight for decision makers

### Benefits

- Typical driver saves 64 hours annually
- 70% performance improvement and reduced query times by 2 orders of magnitude
- More efficient service to the public



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# IMSC - USC Viterbi School of Engineering

## Oracle Spatial and Graph: Transportation Networks

### Objective

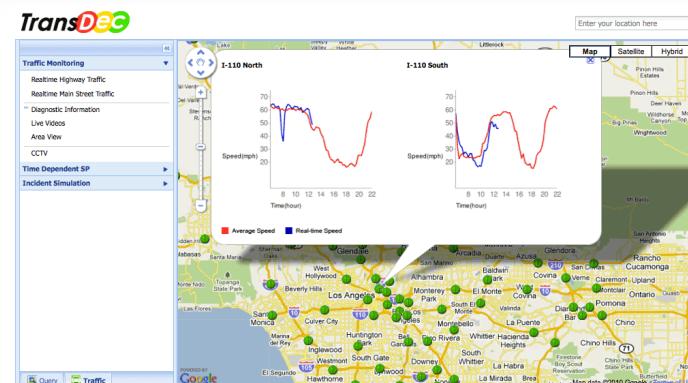
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# Agenda Correction

- **Please note this ROOM CHANGE to the  
1:15 – 2:00 p.m. Training Sessions**

- Deep Dive: Oracle Fusion Middleware New Features (LJ Qian)  
will be in **HORIZON ROOM A**
  - Location Intelligence (David Lapp & Jerry Conrad)  
will be in **PAVILION**