Planning Your Route:  
The Future of Maps in OTM  
August 12, 2014  
Chris Peckham, Oracle  
Craig Fiander, ALK Technologies  
Dan Abugov, HERE  

Agenda

1. Current State: Overview of Maps & EDEs in OTM
2. Road Map for Maps and Related Content
3. ALK Technologies
4. HERE
5. Q & A
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Maps & External Distance Engines

Current State
## Current State

### Maps and External Distance Engines

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<th>Feature</th>
<th>eLocation</th>
<th>eLocation</th>
<th>here</th>
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<th>MAPS</th>
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* Cannot be used by Fleet Management customers

† Not a product limitation

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† Not a product limitation
# How to Connect

<table>
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<tr>
<th>OTM Version</th>
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Maps

Product Road Map
Product Roadmap

- Packaged integration to HERE and ALK Maps
  - Oracle Spatial & Graph will no longer be required!
- Real-time traffic
- Historic traffic patterns
- Tolls
  - Avoid toll roads
  - Include tolls in cost calculations
- Real-time fuel prices
Product Roadmap

• Hazmat routing
• Equipment-specific routing
  – Weight and dimension limitations
• Points of interest
  – Truck stops, rest areas, etc.
• Geofencing
• And much more!!
## Product Roadmap

<table>
<thead>
<tr>
<th>Product Feature</th>
<th>eLocation</th>
<th>alk MAPS</th>
<th>here</th>
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<td>Tolls</td>
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<td>✔️</td>
<td>✔️</td>
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<tr>
<td>Real-time fuel prices</td>
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<td>❓</td>
<td>✔️</td>
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<tr>
<td>Hazmat routing</td>
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<tr>
<td>Points of interest (e.g. truck stops)</td>
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<td>✔️</td>
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</table>

- ✔️ = Already supported
- ❓ = Roadmap based on demand
- ✗ = No plans for support
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Outline

» Why is mapping important within OTM?
   » Benefits to customers
» What is ALK Maps?
   » What can you do with ALK Maps?
» Case Study
» Conclusion
ALK Technologies

» Acquired by Trimble in December 2012
» Based in Princeton, NJ with offices in UK, France, Germany and Florida
  » Founded in 1979
  » Currently ~185 employees
» Depended upon for over 30 years as the industry standard for routing, mileage, mapping, and navigation
» Core Products Offerings – PC*MILER, ALK Maps and CoPilot
Oracle and ALK Strategic Alliance

- ALK Maps now integrated with OTM
- Gold Partner: ALK has access to Oracle development environments and support staff
- OTM Certified: Long history dating back to G-Log, annually tested and easy to deploy
- Innovative Collaboration: street-level, worldwide and rail integrated deployments
- Flexible Delivery: On-premise (OTM, customer or SI hosted), and cloud-based solutions
OTM & ALK Customers (Small Sample)
Why is mapping important in OTM?

Better Maps = Better Decisions

» Superior supply chain visibility and network optimization
» Improve asset utilization and lifecycle management
  » Required for asset tracking
» Boost driver/fleet manager productivity
» Enhance route and customer compliance
» Improve load visibility, matching and status
» Enhance lane and bid analysis
Interactive routing and mapping visualization within OTM
Architecture – Behind the Scenes

ALK Map Data → Routing, Geocoding & Mapping Engine → RESTful (JSON) & SOAP (XML) Web Services → ALK Map Data

Routing, Geocoding & Mapping Engine

JavaScript

ALK MAPS

ALK Map Data

Routing, Geocoding & Mapping Engine

RESTful (JSON)  SOAP (XML)

Web Services

alk MAPS

Oracle Confidential – Internal/Restricted/Highly Restricted
What is ALK Maps?

» Interactive web-based mapping platform

» Tailored to the transportation and logistics industry

» Worldwide map data coverage
Platform Components

» JavaScript API: Map interaction, UI controls, Event handling
» Mapping: Visualize different map styles and multiple layers of data
» Routing: Plan, display, modify and run reports for routes
» Geocoding: Get accurate address information
Commercial Vehicle Routing Expertise

» Vehicle Type
  » Light, Medium & Heavy Duty
  » Vehicle restrictions & dimensions - 53'/102'' Trailer or Twins, Oversized

» Load Type
  » Hazmat (explosive, flammable, etc.)

» Legal & Safety Considerations
  » Left-hand and dangerous turn avoidance
  » Urban & congestion

» Practical Considerations
  » Road class
  » Custom (Avoid/Favor), Practical, Shortest, etc.
  » Toll discouraged and toll costs
  » Traffic –Real time & predictive (historical)
What you can do with ALK Maps?

» Track and monitor vehicles
» Interactively plan and modify routes
» Overlay traffic and weather
» Visualize quantitative data
» Plot custom locations
» Route Analysis visualization for compliance
Advantages to ALK Maps

Commercial Transportation Focused Platform
» Aggressive roadmap focused on commercial (not consumer) use cases
» Powered by PC*MILER: Commercial Routing API for Light, Medium and Heavy Duty Vehicles
» Global and single source routing and Mapping

Responsive Development Team
» Ability to create unique solutions as required

Flexible Licensing Models
» Multiple options best suited for your business type
Case Study - Schilli Transportation
“What used to be a manual cumbersome process of referring to a plotted map and invoking Google Maps for research has been completely automated with this new solution based around ALK Maps. This saves us an average of 15 minutes for each look-up that is performed. On an average during the course of the day, each user is able to save almost 2 hours of time,”
- Peter Adams, Driver Manager at Schilli Transportation
Conclusion

» Mapping is important in OTM
» ALK’s unique position as the Only software and data provider to the transportation and logistics industry
» Oracle and ALK’s long term strategic alliance dating back to G-Log’s beginnings
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HERE is a part of Nokia

Formerly NAVTEQ
The freshest, most detailed data for the best map accuracy and reliability in the world
6K people in 56 countries, with the largest, most highly trained cartography team on the planet
Map heritage that spans 3 decades
Runaway leader in Automotive/In-vehicle navigation
Enterprise Business Unit
   Same focus, R&D, planning as for automotive
Typically B2B – Automotive, Fleet, Consumer
Content: Capturing and Indexing Real Life

- 214 Countries mapped
- 27M Changes per day
- 75,600 Buildings with indoor maps
- 96 Countries with voice-guidance
- 34 Countries with live traffic services
- 80,000 External sources help to create our maps
- 805 Cities with public transit
- 52 Languages
HERE for Oracle

HERE is the Oracle-preferred supplier of geographic content for Oracle applications

• HERE has been delivering content in Oracle format for over a decade
• Oracle licenses *HERE Map Content* from HERE for their maps.oracle.com web portal and for their internal business use
• Oracle licenses *HERE Platform Services* for specific customer use cases
• HERE is an Oracle Gold Partner
• Oracle Spatial Implementation Specialist
HERE for Oracle

HERE provides Oracle Delivery Format (ODF)

- Turnkey HERE Map Content for Oracle
- Fast, easy install of content for mapping, geocoding, routing, and analytics
- Used from the database, all data is on-premise
- Managed locally
- OTM, other Oracle and custom applications
HERE for Oracle

HERE provides Cloud Services for use in the Oracle environment

- Transparently used with Oracle’s existing APIs
- Mapping, geocoding, and routing
- Information comes from a cloud service
- Managed by HERE
- Also available for *on-premise* installation
HERE and OTM Packaged Integration

Direct Connection to HERE Location Platform

Enterprise Ready
- Designed with Fleet Management in mind
- Some of what you will see is on Oracle’s roadmap
- Some is not
- Talk to the Oracle team and tell them what you like
- Talk to us – maybe you can do it today!
Mapping Options

HERE Maps and Oracle

Parameters for MRS Tiles:
- Scheme: normal.day
- Tile Type: hybrid.day
- Language 1: en
- Format: png

Fleet Map Style

HERE Maps and Oracle

Parameters for MRS Tiles:
- Scheme: normal.day
- Tile Type: maptile
- Language 1: GER
- Format: png

Multiple languages
Many Map Styles to choose from
Trucking and Transport

HERE Maps and Oracle

Examples

Here Truck Routing

Region: North America

Start: Causeway St, Boston, MA

Destination: Allston, Boston, MA

Show Car Routing Only: Yes
Keep Previous Routes Displayed: Yes

Truck Attributes:

Source: Truck

Shipped Hazardous Goods:

 Explosive: Yes
 Gas: Yes
 Radioactive: Yes
 Combustible: Yes

Height/weight etc.

Gross Weight: 10,000 pounds

Options:

Auto
Truck
Hazmat
Trucking and Transport

Where exactly are the restrictions?
Weather
Street Level Imagery
Platform Data Extension: Add Attributes for Analysis

Slope Along Route
Platform Data Extension: Add Attributes for Analysis

Driver Behavior Analytics (Speed Limits)
What if...

You could draw a box on the map in your browser and store it in Oracle
   You could use it as a geofence
   You could use it as an exclude area to eliminate roads from routing

You could buffer a route and store it in Oracle
   You could use it as a geofence

You could create a drive time or drive distance polygon around a destination
   You could alert the receivers you are on your way when the gps ping hits the database

You could fetch any spatial data from Oracle and display it on the map
   You could create custom maps
What if...

• HERE holds trillions of GPS traffic samples “probe data”, stretching back several years, over 6 continents
  – Real-time traffic, traffic patterns, and predictive traffic

• HERE’s can process data with a small latency from collection to analytics

• Probe data can help answer questions like
  – What was traffic like last Tuesday on this driver’s route?
  – How fast was the driver going compared to traffic at that time?
  – When was it hard to get into this depot?
  – How did traffic impact my routing this month, as opposed to last month? Year over year?

• Please stay tuned!
APIs and SDKs

APIs

• REST API for all features
• New Javascript 3.x (OTM) APIs
  Great for Mobile
  Disconnected use cases for maps

SDKs

• Native for iOS and Android
  Uniquely capable with disconnected maps, geocoding, and routing
Safe Harbor Statement

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