



TACOMA POWER

Distribution/Outage Management System

Public Utility Board Update

August 12, 2009

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December 2006 Storm



What is a D/OOMS?

- A system that integrates and leverages utility customer information, work management and control systems
 - Identify outage locations
 - Identify number of customers
 - Assist daily operations
- Proven technology
 - Several major suppliers of D/OOMS
 - Over 200 systems in production at utilities across the country

D/OMS Milestones

- PUB approval
 - D/OMS implementation
 - Special project of limited duration
- Currently on time and within budget

	<u>Estimated Project Costs</u>	<u>to Date</u>
CGI Technologies and Solutions, Inc. and Subcontractors	\$1,365,000	\$535,308
Other Implementation Costs	\$1,515,000	\$519,872
Proposed AVL for D/OMS support	\$240,000	\$0
Total	\$3,120,000	\$1,055,180

D/OMS Milestones (Cont.)

- Jan. 2009 - Began D/OMS project
- Jan-April 2009 - Design workshops
 - IVR/SAP-CCS/EMS
 - GIS
 - SAP Work Management
 - AVL (Automatic Vehicle Location)
- April 2009 - CGI Delivered development system hardware and software
- May 2009 - Completed all design and interface specifications
- July 2009 - Delivered final test scripts
- Aug 24, 2009 - Factory acceptance test

D/OMS Next Steps

- 2009/10 - Request PUB approval for a software support/maintenance agreement
- 4th qtr 2009 - Site Acceptance Testing
- 1st qtr 2010 - Roll out to end users
- 2010 - Continued support and training during the warranty period
- Procure and implement AVL to support the D/OMS

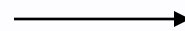


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Automated Vehicle Location Global Position System

AVL Defined

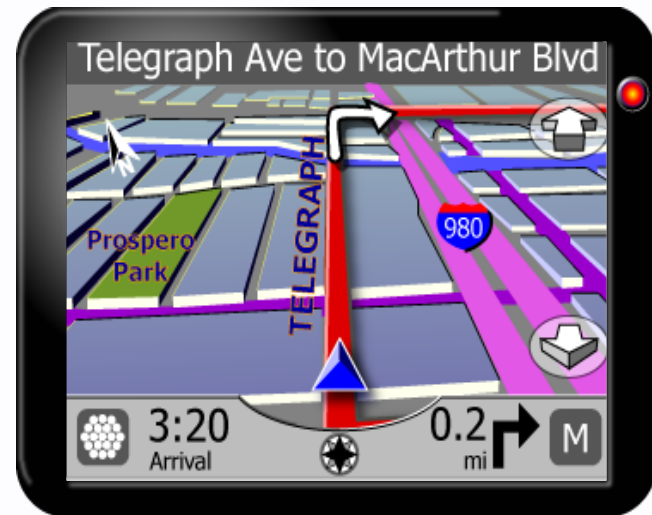
- Blending of computers and communications
- Vehicle components gather, receive, store, and transmit data
- Database components harvest and process data from vehicles
- Communication technology connects them



Fleet Outlook
Database

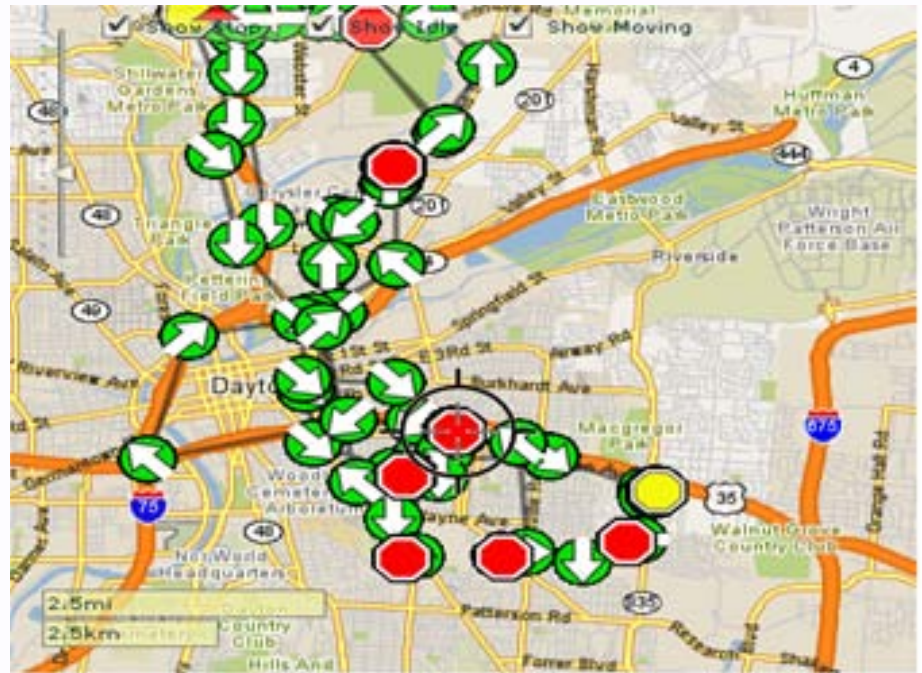
AVL Benefits

- Safety
 - Roadside assistance
 - Crash analysis
 - Last known vehicle location
- Wi-Fi Hot Spot
- In Cab Navigation



AVL Benefits

- Vehicle Location
 - D/OMS
 - Navigation
 - Dispatch
 - Route management
 - Stolen vehicle recovery



AVL Benefits

- **Vehicle Efficiency Monitoring**
 - Engine start and stop time recording
 - PTO Operation
 - Speeding alerts
 - Fuel consumption/efficiency rates
 - Stop lengths
 - After hours trips
 - Idle time

Industry Statistics

- 30-minute reduction in idle time produces:
 - Fuel savings of \$44/month per vehicle
 - Greenhouse gas CO₂ reductions of 216/pounds per vehicle



Key Components

- Memorandum of Understanding
 - Approved by Tacoma Joint Labor Committee and City of Tacoma February 27, 2008
- Change Management Team
 - Organizational Impact Analysis
 - Communications Plan
 - Training Plan

AVL Implementation

- Phase 1 - September 2009
- Additional devices may be deployed pending evaluation of the benefits realized in phase 1.



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We are seeking Public Utility Board approval for Automated Vehicle Location system will serve as a critical tool for responding to power outages, while bringing other efficiencies and cost-saving benefits.