

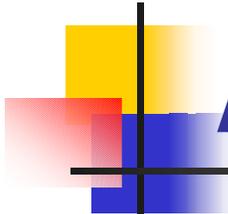


Technology Development and System Integration for a Vehicle Miles Traveled Based Revenue Collection System Prototype

Project Status Update/Demonstration for the
Road User Fee Task Force

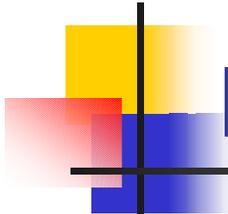
Department of Industrial and Manufacturing Engineering
Oregon State University

May 14, 2004



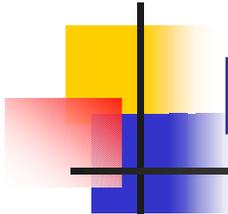
Agenda

- Review – It's been awhile!
 - What are we doing?
- Status of Development
- Demonstration
- Next Steps (Prototype Phase)
- User Testing Phase



Review – What are we trying to do?

- OSU Project Objectives
 - Develop a “prototype” Vehicle Miles Traveled (VMT) based revenue collection
 - “Invisible to drivers” = Electronic
 - “Pay when you fuel”
 - Learn how various technologies perform
 - Learn what system design works best

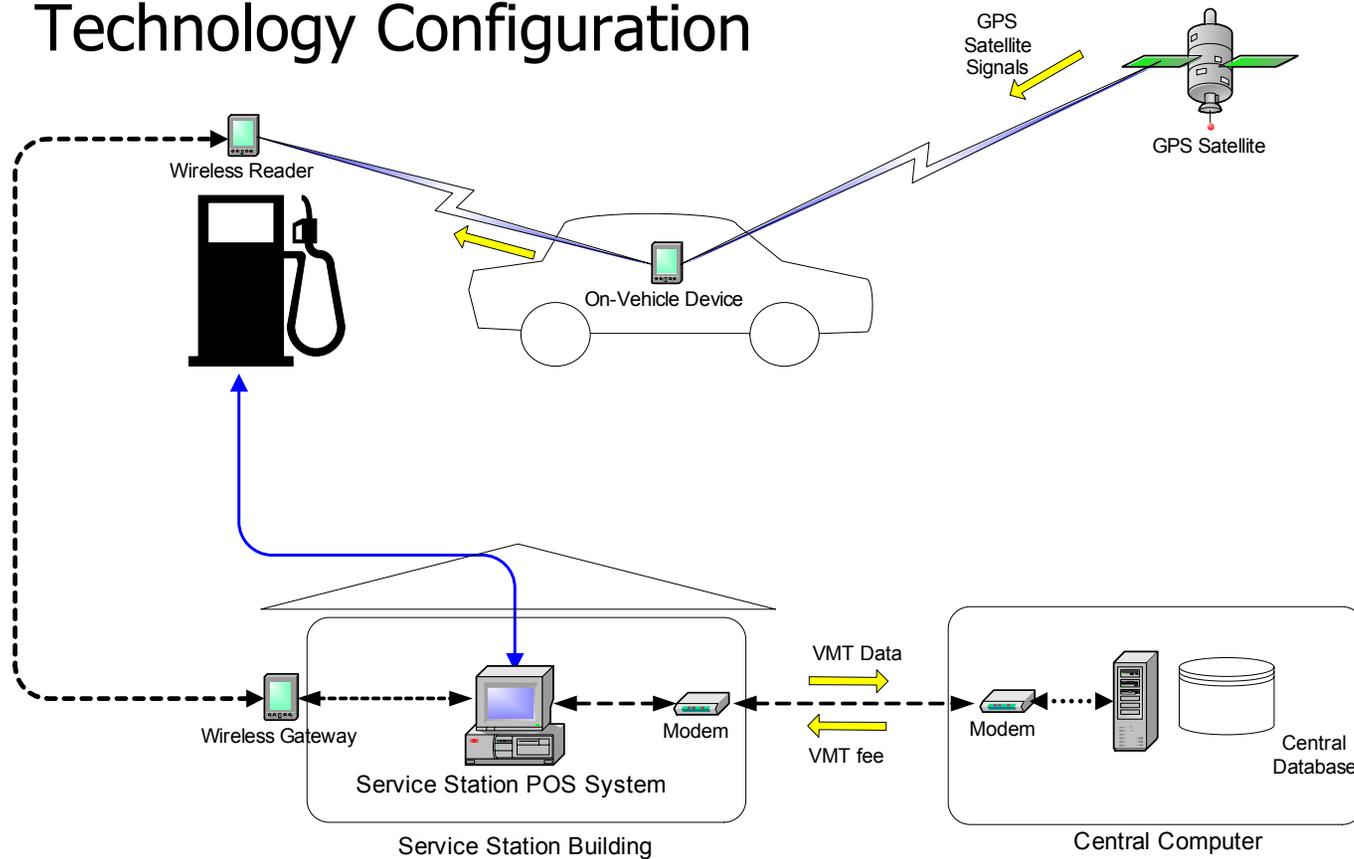


Review – What did we do?

- We developed two “Technology Configurations”
 - Two different versions of an electronic VMT-based revenue collection system
- How do they differ?
 - GPS
 - Odometer

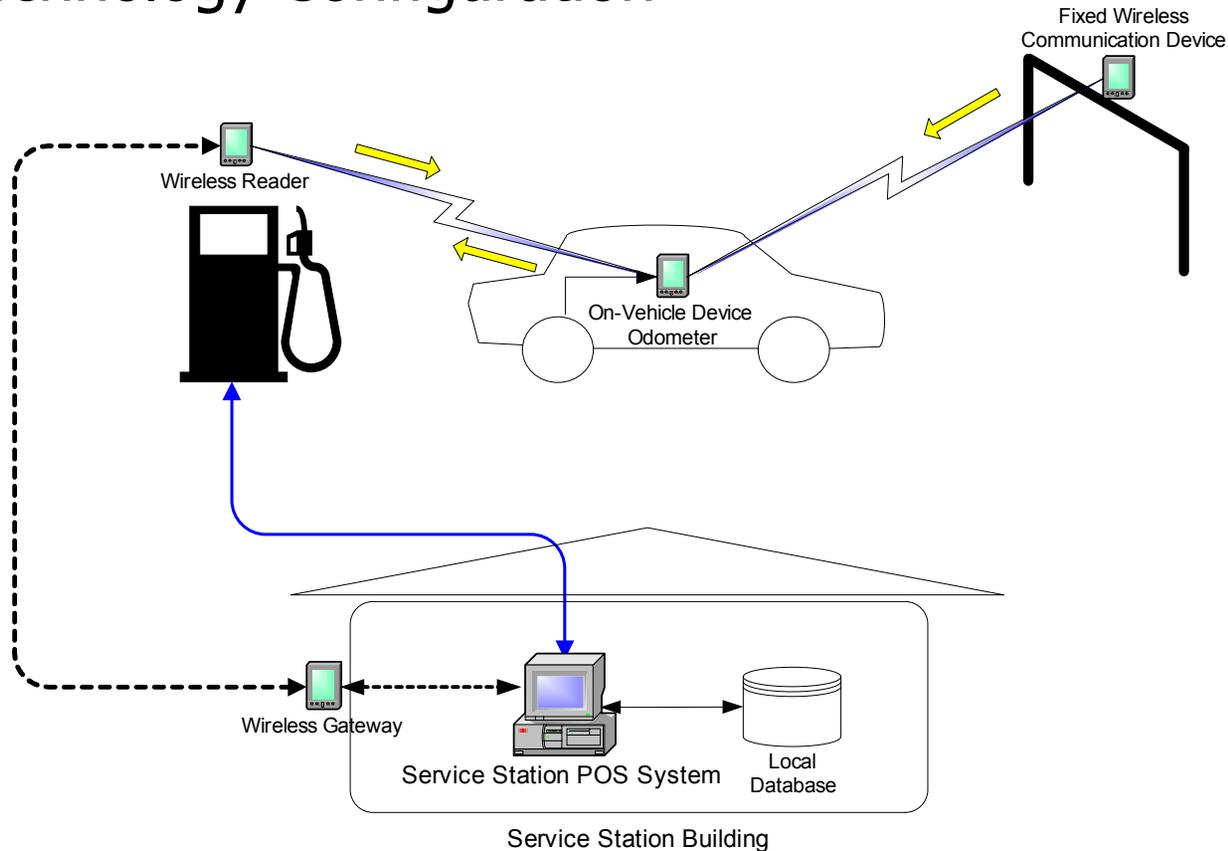
GPS Technology Configuration

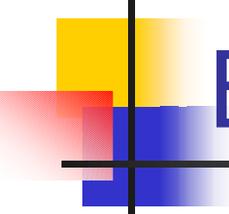
Technology Configuration



Odometer Technology Configuration

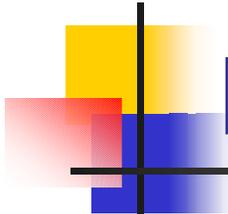
Technology Configuration





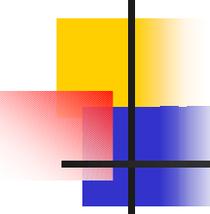
Basic Functions

- Collect VMT
 - GPS – Zones within Oregon
 - Odometer – Within Oregon
- Transfer VMT data from Vehicles when fueling
- Process VMT data and charge the proper fee



Development Status

- On-vehicle VMT collection devices/ Wireless data transfer devices
 - Contract established with AFX Technologies
 - Status → **Completing Tests**
- Point-Of-Sale system
 - Contract established with DCSS
 - Status → **Completed**
- Integration software and communications links
 - Developed by OSU
 - Status → **Completed**
- Databases
 - Developed by OSU
 - Status → **Completed**



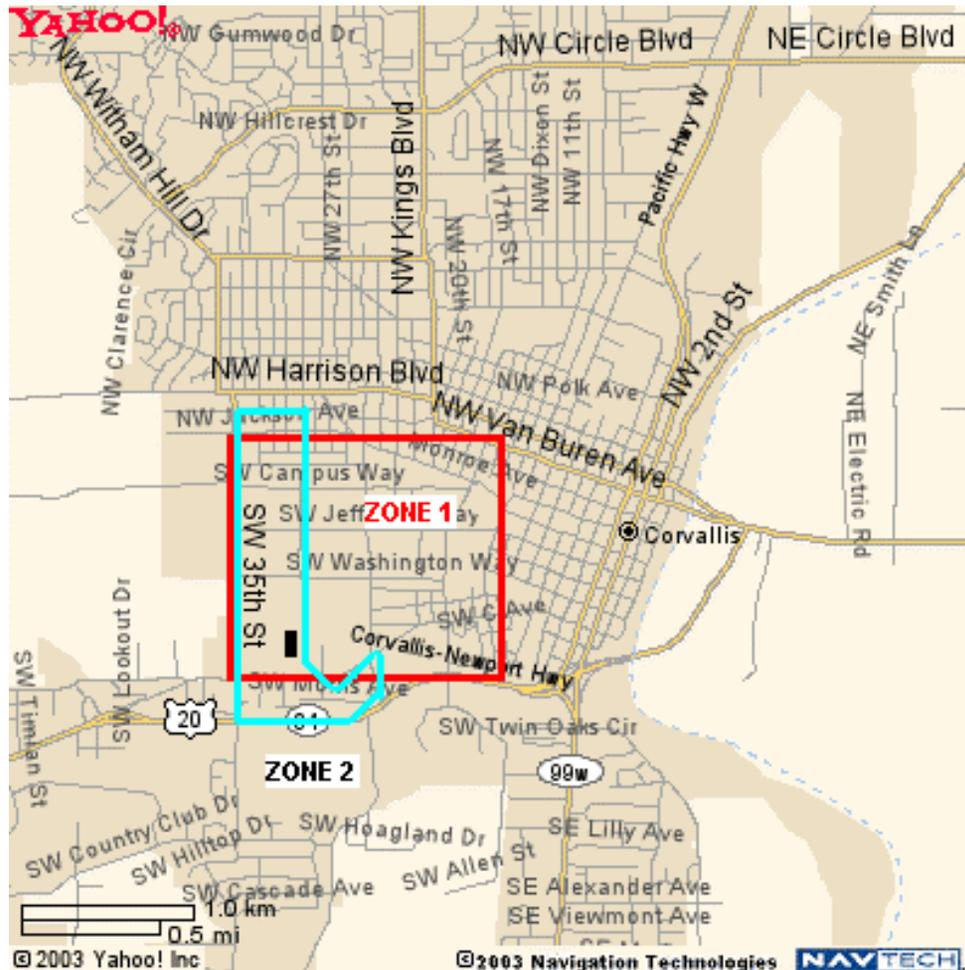
Demonstration

- Shuttle service to the test site
- Tour
 - On-vehicle devices
 - Service station
 - Transaction demonstration – Odometer
- Mileage collection demo – GPS, Hybrid devices
 - RUFTF members – assigned vehicles
 - Overflow vehicles
- Fuel purchase transaction simulation
 - Oregon vehicles
 - Out-of-State vehicle

Test Site at OSU

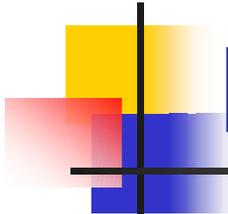


Drive Route



Vehicles – 1991 Dodge Dynasty, form ODOT Fleet Services





Next Steps

- Complete testing
- Document test results
- Start additional development for the next phase





Discussion/Questions???

