Smart Media Technology (SMT) Implementation Project

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Fare Collections

Regional Transportation District (RTD)

Denver, Colorado

SMT – Objectives

- To set the foundation for a robust automated fare collection system
- To capture and analyze pass programs' participation and utilization data
- To enhance passenger experience while realizing benefits and efficiencies of new technology

SMT – Rollout

- Phase 1 – Eco Pass program, 4Q 2011
- Phase 2 – Period and stored trip passes, 2012
- Phase 3 – Stored Value (electronic purse), 2014
- Future – Open payments

SMT – Resources

Contractor:
ACS – Prime

Sub-Contractors (DBEs 16% of project):
- Bus and Platform installations
- Call Center, Customer Service, and Marketing
- Project Management

Owner's Representative Consultants:
- LTK Engineering – SMT and Farebox
- IBI Group – CAD/AVL project

SMT – Major Milestones

Contract award – ACS

- Notice to Proceed – June 30, 2010
- Preliminary Design Reviews – 4Q 2010
- Final Design Reviews – 1Q 2011
- Factory Acceptance Testing – April 2011

SMT – Major Milestones

- Pilot Test 1 (2 weeks, 1,000 media, 45 buses and 2 platforms) – May 2011
- Pilot Test 2 (2 months, 10,000 media, 350 buses and all 38 platforms) – 3Q 2011
- Reliability, Maintainability, and Accuracy Testing (3 months, 200,000+ media, 1,000 buses) – 4Q 2011)
- System Acceptance 1Q - 2012

SMT – On-board Equipment

Bus

- Prototyping of 11 sub-fleets plus those with Automatic Passenger Counters
- Prewiring – 25% of fleet to prepare for pilots
- On-board Hardware installation – Mobile Router (half with custom enclosures) and antennas, Smart Media Validator, Operator Control Unit
- Farebox
- Power Management System with CAD/AVL

SMT – LRT Platform Equipment

Rail

- Minimum of 2 validators at each platform
- Placement designs resulting from traffic and volume analysis, typically next to existing TVMs;
- Platform electrical enhancements – new circuits, conduit and stub-ups
- Hardware installation – Smart Media Validator, pedestal, and cellular modem

SMT – Information Technology

- Architecture – Virtual servers and Oracle Exadata
- 802.11n Aruba WiFi at 8 garages for Mobile Router
- Customer Web Portal and Banking Server (PCI)
- Cellular communications over VPN
- Integration with CAD/AVL (MDT) and Farebox (single sign-on and stop info)
- Integration with Ridership Data warehouse

SMT – Customer Service

- Customer Call and Walk-in Service center
- Solicitation of Pilot test participants
- Smart Media (MiFare classic 1K contactless cards and stickers) procurement, distribution and management
- Future branding campaign