

MVTA Driver Assist System

Presented to MVTA Board and
Dakota County Board

June 15, 2010

Driver Assist System Background

- Why DAS? *Increase system reliability and safety by improving driver confidence and skills operating on bus-only shoulders*
- Two major components:
 - University of Minnesota Driver Assistance installed on 10 buses
 - FAAC/Realtime Technologies Driver training simulator installed at Burnsville Bus Garage

Driver Assist System Background

- Funded through Urban Partners program (UPA) in late 2007
 - \$1M to MVTA for simulator, driver training, bus artwork
 - \$4M to U of M for design of system, equipment, and installation
- Status:
 - System installed on buses; simulator install completed; drivers being trained
 - Ironing out details with Schmitt's

Simulators in Transit

- FAAC is major vendor; MVRTA worked with subsidiary company RTI because of unique configuration needs
- Simulators present at SEPTA, NJT, MBTA, NYCTA, Pittsburgh, Rochester (NY), Paducah (KY) among others
- RTI brings extensive military and research experience

DAS Components in Simulator

- Four feedback systems, driver can choose which ones to enable
- Head-Up display – superimposes virtual world on real world
- Virtual mirror – displays surroundings
- Seat vibrator – acts as a virtual rumble strip
- Steering wheel actuator – provides suggestive torque to encourage driver to steer back to lane center

Training Simulator

- What you'll see in training lab
- Driver (subject) area – bus cab, 5 forward displays, 5 mirror displays, DAS components
- Trainer (operator) area – simulator controls, analysis tools
- Observer area – 4-6 observers can view simulation in real time or playback

Training Simulator

- We will demonstrate the system with staff driving
- After the meeting, if anyone wants to drive we will provide the chance