

*Presentation to:*



Virginia Transit Association  
Annual Conference, May 31, 2013  
Hilton Hotel-Old Town  
Alexandria, VA

A photograph showing a person in a white shirt and dark vest operating a vehicle simulator. The person's hands are on a steering wheel, and they are looking at a dashboard with various controls. The background is a blurred simulation of a vehicle interior.

real. experience.

AN **AROTECH** COMPANY  
TRAINING & SIMULATION DIVISION

# USE OF “SIMULATION” TECHNOLOGY IN SAFETY & TRAINING

---

The use of “Simulation” technology in safety & training “supplements” the training process so training can be tailored to:

- ❖ Deliver operational excellence
- ❖ Meet specific safety performance objectives
- ❖ Qualify only those students who have demonstrated the ability to operate according to the standards of the hiring transit property

# TOTAL TRAINING SOLUTIONS PACKAGE

---

**\*Set the table for implementing & reaping the benefits of new technologies by first having in place:**

- **Standardized Criterion Based Curriculum**  
(to predict the safety performance of student bus operators after training)
  
- **An Effective “Train the Trainer” Program**  
(to ensure that the depot “route familiarization” operators are knowledgeable regarding what the student was taught at the training center)
  
- **Corrective Action/Refresher Solutions**  
(fixing the problem)
  
- **Post Training Programs**  
(“hire to retire” philosophy)

# TRANSIT SIMULATORS

---

## MB-2000 Series



## MB-1500 Series



# WHERE DO WE START WITH TECHNOLOGY IMPLEMENTATION?

---

- Human Technological Factor begins with a thoroughly trained new hire  
(training to ensure only the “cream of the crop” advance to passenger service)
- Supplying them with user friendly technological tools  
(selecting buses, mirrors, cameras, windshield design, fareboxes etc...that do not cause distractions or blockages for the operator)  
*\*the operator requires sight lines that increase visibility*
- Compiling information from results that were revealed in a pilot program  
(can incorrect or too much technology be the problem instead of the cure?)

# USE OF “SIMULATION” TECHNOLOGY IN SAFETY & TRAINING

---

- **Basic Skill Development for New Trainees**  
(supplementing training bus activities)
- **Annual/Bi-Annual Refresher**  
(targeting and reducing #1 collision type)
- **Corrective Actions**  
(“fix it” tool after a bad behavior has been identified by an on-board camera)
- **Collision Recreation (Scenario Toolbox)**  
(recreating and saving high risk incidents for future use)

# EXAMPLES OF USING SIMULATION TECHNOLOGY AS A BASIC SKILL DEVELOPMENT TOOL



# UTILIZING A PRESCRIPTION BASED SIMULATED “FIX IT” ENVELOPE

---

C.....orrective

A.....ction

R.....emedies

E.....nvelope



**Utilizing both live bus / simulation to deal with:**

**Collisions, Mirror Set up & Utilization, Pedestrian Knockdowns, Curb Jumpers, Abrupt Steering /Braking, Excessive Speed Issues, Following Distance, Failure to “Cover” Right, Clearance Issues, Striking Fixed Objects etc...**



# USE OF “SIMULATION” TECHNOLOGY IN SAFETY & TRAINING

---

## Summary: Simulation Enhances Training!

- ✓ It does so by providing a “**low risk**” environmental setting for those “**high risk**” collisions. Allowing one to see the results of an incorrect decision is probably the most enhancing element of simulator training. Providing the student the opportunity to repeat a particular skill set until mastery sets in makes all the difference.
- ✓ by enhancing the instructors capabilities and exposing training inconsistencies among the training staff that compromise “standardization.” *Poor foundation = poor training program.*
- ✓ by evaluating the judgment of the participant. (Was the correct judgment utilized by the participant to **starve off disaster.**)

A nighttime photograph of the New York City skyline as seen from the water. The scene is dominated by the lights of the city and the suspension cables of a bridge. In the center, a tall building is illuminated with a large American flag. To its right, the same building is lit up with three NYPD (New York City Police Department) shields. The water in the foreground is dark, with some light reflecting off its surface. The overall mood is somber and commemorative.

# Remember the Heroes

September 11, 2001

# KEEP IN TOUCH

---

## CONTACT INFO:

- [lgmaiello@faac.com](mailto:lgmaiello@faac.com) for simulator concerns/training.
  
- [louies.bus\\_talk@yahoo.com](mailto:louies.bus_talk@yahoo.com) for training needs.
  - Curriculum Review and Recommendations
  - 8hr:45 min – 12hr:30 min New Bus Operator Training Program
  - Train the Trainer Class
  - Public Speaker, Safety Awards Dinners etc...
  - Expert Witness Reviews (Buses)
  - Collision Reduction Measures
  
- **Phone: (845) 705-0056**