



Brainy Metro Bus of tomorrow will ride into the L.A. sunset equipped with an integrated wireless communications system called the Advanced Transportation Management System.

Motorola Masterminds Creating 'Brainy' Buses for MTA

By GARY WOSK

(Dec. 20, 2001) Within three years, the Metro Bus fleet will be transformed into a motor pool of highly intelligent, quick-thinking coaches capable of spewing forth a steady stream of real-time information to emergency personnel and planners. The result: More efficient service and a safer environment for operators and customers alike.

Motorola, Inc., has been assigned the task of overseeing the installation aboard Metro Buses of an integrated wireless communications system called the Advanced Transportation Management System (ATMS).

The components are:

- (Voice and Data Radio System) Bus operators will be able to communicate much more quickly with MTA dispatchers and receive faster roadside assistance by having the option of using a voice or data radio. The latter tool includes a driver control module with numerical keys representing numerous categories of emergencies.
- (Automatic Vehicle Locator) MTA dispatchers and law enforcement officials will be guided to the exact location of a bus in distress with the aid of global positioning satellites. Locations will be displayed on dispatch center monitors.
- (Automatic Passenger Counter) MTA planners will be able to make immediate short- and long-term service adjustments by analyzing information recorded by on-board infrared beam sensors about passengers loads and ridership patterns. The information will be relayed to an on-board processor and then downloaded at day's end.
- (Video Surveillance System) Bus operators will be able to see activity on the exterior of a bus by looking at a monitor that will show live images transmitted by outside cameras. A hard drive will store 72 hours of images, including those of inside cameras, until downloaded on a central processor.
- (Computer Aided Dispatch) An immediate priority response to any type of emergency on board an MTA bus. The device will streamline data collection and provide faster construction and updates of the database.
- The MTA also is evaluating an option to install a Voice Annunciation System and Vehicle Health Monitoring System.
- The Voice Annunciation System, triggered by global positioning

satellites would activate bilingual, computerized voices that will greet customers, announce all stops and make safety messages.

- The Vehicle Health Monitoring System will allow mechanics to perform much better preventive maintenance and will reduce MTA costs by reviewing engine report cards generated by a separate on-board computer.

"The Advanced Transportation Management System will provide the MTA with a sophisticated new 21st century tool to help operate and manage the bus fleet," said Deputy CEO John Catoe.

"ATMS offers the potential for the MTA to realize service improvements, increased efficiency, reduced operating costs and enhanced safety by providing the agency with more comprehensive, accurate and detailed data for routine analysis," he said.

The MTA Board awarded a \$72 million contract to Motorola in November. The company will be responsible for installing and overseeing the start-up and testing, as well as managing the system.

Motorola has teamed with Orbital Science Corp. as the sub-contractor. The MTA, in conjunction with TM TechSystems Inc, has developed the technical specification, which details the implementation approach.

"LACMTA has designed one of the most advanced transportation management systems in the world," said Rick Neal, Motorola vice president. "Motorola has implemented many of the largest and most complex communication systems that exist today."

First in the United States

The MTA will become the first transit agency in the United States to sport such a comprehensive fleet of "Smart Buses" (another name for ATMS).

These buses will begin traversing the streets and highways of LA County within three years, about the same time the MTA expects to unveil its new "Universal Fare System" (UFS) featuring "Smart Cards."

The plastic, wallet-sized Smart Cards, embedded with computer chips, will interface with the MTA's ATMS and could eventually eliminate the need for cash, tokens and coins as the method of payment in a seamless public transit system.

"The overall mission of the MTA bus system is to ensure Los Angeles bus riders a safe, efficient mode of transportation throughout the greater Los Angeles region," Catoe said. "To accomplish this mission into the 21st century, ATMS must provide a reliable, flexible and expandable communication service to meet the needs of controllers, bus operators, road supervisors, riders and management."

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