ON BOARD

EN ROUTE WITH GEORGIA'S AUTOMATIC VEHICLE LOCATION SYSTEM

No. 1 March 2011

IN THIS ISSUE

On behalf of the AVLS Working Group, I am pleased to introduce this first issue of *On Board: En Route with Georgia's Automatic Vehicle Location System* (AVLS). Our goal for this newsletter is to keep you informed about the progress being made to install the AVLS in Georgia ambulances. The AVLS will significantly increase the State's ability to coordinate emergency medical services resources during mass casualty or natural disaster incidents.

We at GEMA/HS are grateful to the Georgia Trauma Care Network Commission, the Georgia Emergency Medical Services Association, the Georgia Division of Public Health, and the Georgia Hospital Administration for their groundbreaking work with the AVLS pilot program. We are glad to join the team and help build upon their success as we collectively strive toward deployment of the AVLS in ambulances statewide.

This first edition of *On Board* provides project background, an introduction to the AVLS Working Group, a short feature piece on the company that created the AVLS technology deployed in Georgia, and user testimonies. We welcome and encourage your feedback, ideas for future topics, and any questions.

Ralph Reichert, Chair
AVLS Working Group

Georgia AVLS Program History

Kirk Pennywitt
Georgia Tech Research Institute

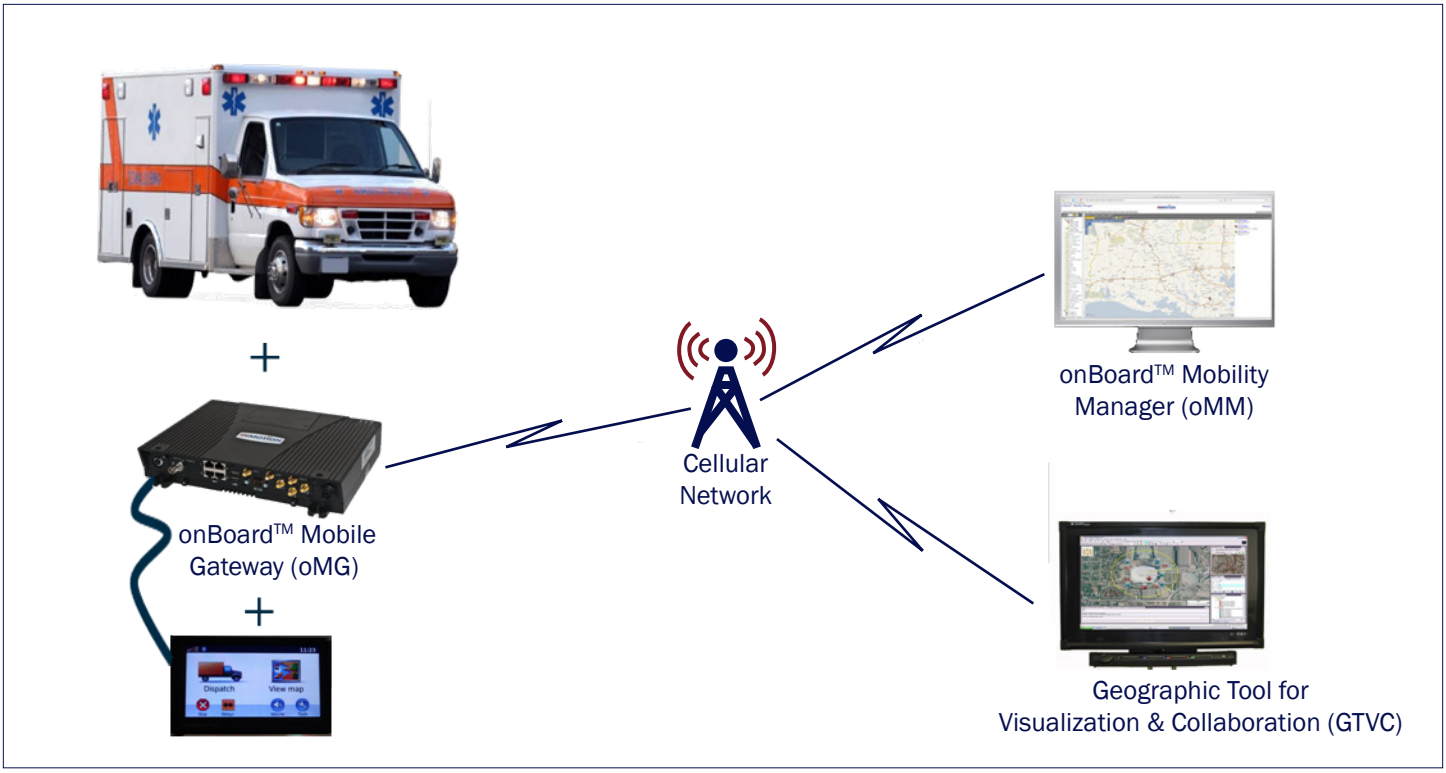
The Georgia Automatic Vehicle Location System Program for Georgia EMS First Responders began in 2008 when representatives from the Georgia Trauma Care Network Commission (GTCNC) visited the Georgia Tech Research Institute (GTRI) to investigate technologies that could improve the State's trauma care system.

Doug Brownlee of Macon Communications installs the AVLS in a Laurens County EMS ambulance during the pilot vehicle installation on April 23, 2010.

GTRI demonstrated an application developed under GEMA/HS sponsorship known as the Geographic Tool for Visualization & Collaboration (GTVC), a geographic information system used for the visualization and management of resources during responses to emergencies and homeland security incidents. GTCNC was interested in the potential use of GTVC for the real-time viewing and assistance in management of EMS vehicles. GTCNC contracted with GTRI to implement a pilot program to equip all 911 First Responder vehicles in Georgia EMS Regions 5 and 6 with GTVC-compatible AVLS units.

From a pool of nine vendors who responded to the request for proposals, In Motion Technology Inc. of Canada won the contract based on technical

(continued on page 2)



The AVLS consists of an ambulance installed with In Motion Technology Inc.'s* onBoard™ Mobile Gateway *with cellular aircard, WiFi Access Point, external antenna, and Garmin GPS Personal Navigation Device that communicate with In Motion Technology Inc.'s* onBoard™ Mobility Manager *and/or the GEMA/HS* Geographic Tool for Visualization & Collaboration *(GTVC) software in the State Operations Center and the EMS provider's facilities.

("Program History" continued from page 1)

capabilities, service and support, the ability to integrate with mapping systems such as GTVC, and overall five-year system cost.

In June 2010, GTCNC issued invitations to qualified 911 First Responders in EMS Regions 5 and 6 to participate in the AVLS pilot program. The initial program kickoff meeting was held in August 2010.

During the pilot, GTCNC purchased all of the AVLS units and paid for installation, air time and service costs. To date, participants representing twenty-six EMS companies and agencies have received nearly two-hundred AVLS units. About 75% of the units are installed and fully operational, with more coming online every week. Overall, the pilot program has achieved a 90% agency participation rate, with 82% of all Region 5 and 6 vehicles equipped with the AVLS units.

As the pilot moved into its final phase, GEMA/HS secured federal homeland security funds and contracted with GTRI to deploy AVLS units for the remaining EMS vehicles in Georgia under the support of mass casualty incident (MCI) management. Recognizing that planning, training, exercising, and evaluating are critical components of any large scale program implementation, GEMA/HS then assembled an AVLS Working Group composed of stakeholders from the GTCNC, Georgia Hospital Association, Georgia EMS Association, Georgia Division of Public Health, GEMA/HS and GTRI.

In February 2011, GEMA/HS issued a survey to Georgia EMS providers to collect information on the number of eligible vehicles to be equipped, which will help determine participants for the next phase of AVLS deployment. GEMA/HS's agreement with the individual EMS providers will be similar to that established between the GTCNC and the EMS providers during the Pilot Program, i.e., GEMA/HS will purchase and install AVLS units in the providers' vehicles in return for the providers sharing their vehicle status information with GEMA/HS and other designated command centers.

When the State's AVLS initiative is complete, Georgia will have a powerful trauma and mass casualty incident management system with a state of the art advanced and expandable telemedicine technology infrastructure.

The Collaborative Approach: Spotlight on the AVLS Working Group

Tim Boone, Ph.D.
Georgia Tech Research Institute

GEMA/HS has formed a working group to serve in an advisory capacity and promote participation in the AVLS initiative. A collaborative approach involving key stakeholders will best ensure successful statewide implementation of the AVLS, building on the previous pilot led by the Georgia Trauma Care Network Commission. The members of the AVLS Working Group are:

Ralph Reichert (chair)	GEMA/HS
Billy Kunkle	Georgia Emergency Medical Services Association
Courtney Terwilliger	Georgia Emergency Medical Services Association
Mickey Moore	Georgia Division of Public Health
Pat O'Neal	Georgia Division of Public Health
Keith Wages	Georgia Division of Public Health
Lee Oliver	Georgia Hospital Association
Karen Waters	Georgia Hospital Association
Huey Atkins	Georgia Trauma Care Network Commission
Ben Hinson	Georgia Trauma Care Network Commission
Jim Pettyjohn	Georgia Trauma Care Network Commission
KJ Retherford	GEMA/HS
Leigh McCook	GTRI

The group has met monthly since November 2010. Since then, it has recommended developing a coordinated communications strategy and several other current and forthcoming activities, including:

- Creating a memorandum of agreement to be signed between the state and the EMS providers to participate in the AVLS;
- Solidifying an implementation schedule for the remainder of this year;
- Developing AVLS standard operating guidelines and procedures, informed over time by input from field experience and emerging best practices;
- Soliciting ideas from EMS providers from Regions 5 and 6 for content and services to be included in the training program; and
- Having In Motion Technology Inc. conduct equipment training sessions for EMS providers in Regions 5 and 6.

"The representatives on the AVLS Working Group have proven to be professional resources with the right combination of ideas, knowledge, experience, and energy to help guide this initiative to successful realization," said member Courtney Terwilliger of the Georgia Emergency Medical Services Association.

Spotlight on In Motion Technology Inc.

Kirk Pennywitt
Georgia Tech Research Institute

The use of mobile data communications applications for coordination and management of first responder fleets has grown tremendously during the last decade, allowing for far timelier and integrated services that ultimately translate into more efficient use of public funds and, most importantly, lives saved.

When the Georgia Trauma Care Network Commission (GTCNC) launched its pilot AVLS program for Regions 5 and 6, it first tasked the Georgia Tech Research Institute (GTRI) to conduct a state needs assessment, research available systems, develop a request for proposals, and recommend a preferred vendor from proposals submitted. Ultimately it was decided that In Motion Technology Inc. (In Motion) of Canada would best serve Georgia.

Founded in 2002, In Motion is a pioneering company that strives to provide the most flexible, reliable, and secure coverage and capacity to support a wide variety of in-vehicle and mobile communications and data transmission devices. According to its company overview, In Motion is guided by four key principles:

- Mobile networking must enable a variety of devices and applications.
- Mobile communications should not be constrained by any one wireless network.

(continued on page 4)

("In Motion Technology" continued from page 3)

- Mobile networking technologies need to be easy to deploy and use.
- Solutions need to pay for themselves.

Some of the winning features that distinguished the In Motion product from its competitors were:

onBoard™ Mobile Gateway (oMG)

- a proven track record in equipping similar fleets;
- inclusion of an integrated wireless network hotspot within its system;
- the ability to use multiple cellular carriers simultaneously (potentially important in areas with fringe coverage from a single cellular carrier);
- the ability to use an inexpensive commercial GPS Personal Navigation Device (PND) as the navigation and messaging interface; and
- a web-based fleet management and dispatch software interface designated as the onBoard™ Mobility Manager (oMM).

The inclusion of the In Motion oMM software is particularly useful, as it provides the users with an application specifically designed for fleet management, messaging, and dispatch. This allows the individual EMS agencies primarily to use the oMM software for their daily dispatch, management, and quality improvement operations, while the GTVC software is used in a more strategic mode in designated Command Centers to provide a larger picture of EMS operations in combination with emergency response resources and activities.

Learn more about In Motion Technology Inc. at *www.inmotiontechnology.com*.

User Testimonies

Tim Boone, Ph.D.
Georgia Tech Research Institute

The most valuable feedback in determining whether or not the AVLS initiative is successful is that of day to day users of the equipment.

"The AVLS is saving us time and money. It allows us to track calls and use our vehicles more efficiently. It is also helping us see and document our needs for an additional vehicle. Once it is set up and running, it pretty well runs itself. We used In Motion customer support a bit at first, but now that we have some experience, we don't need to call as often and the system works fine. It is great to be able to monitor and coordinate calls even from my own house."

JT McAlvoy, Warren County EMS

"The AVLS has been great for our system. I can locate my units instantly when I need to assign a call. Our medics are now able to check patient meds they are unfamiliar with online, so I think our patients are getting better care. Very importantly, it provides GPS coordinates to the driver and to the dispatcher that can be passed quickly to air ambulance pilots making that coordination much simpler and faster."

Tommy Wolfe, Warren County

"We are very pleased. Our resources are limited, and roughly fifty percent of our calls require transport to out of county hospitals. Being able to see where my ambulances are has made managing calls much more efficient. It has helped our medics when going to unfamiliar locations. We plan to link the system to our 911 center so that they can see which truck is nearest to a call destination."

Gary Pinard, Screven County

WEBLINKS

Georgia Emergency Management Agency/ Homeland Security - www.gema.state.ga.us

Georgia Association of Emergency Medical Services - www.ga-ems.com

Georgia Trauma Commission - www.georgiatraumacommission.org

Emergency Medical Services - www.ems.ga.gov

Georgia Hospital Association - www.gha.org

Georgia Tech Research Institute - www.gtri.gatech.edu

Produced at the Georgia Tech Research Institute.
For further information, contact Erik Oliver at 404-407-7625 or erik.oliver@gtri.gatech.edu.