PENNSYLVANIA TURNS TO ALABAMA FOR HIGH TECH SOLUTIONS

One of America's largest and most famous highway systems, the 545-mile Pennsylvania Turnpike — has turned to Huntsville's Intergraph Corp. to manage the safety of the 188.2 million vehicles a year that swarm its roadways.

Over four hundred 911 calls and 11,000 emergency radio transmissions per day flood in to the Pennsylvania Turnpike's Traffic Operations Center in Harrisburg, and now those calls will be routed through Intergraph's computer-aided dispatch (CAD) and reporting software — providing an early warning and response network that spans the entire turnpike.

Known as "America's First Superhighway," the Pennsylvania Turnpike opened Oct. 1, 1940. In 2009, it generated $701.6 million in annual gross toll revenue from its 62 fare-collection facilities.

Intergraph, one of Alabama's premier technology companies, founded in 1969 as M&S Computing Inc., is a leading global provider of engineering and geospatial software. It has business and government customers in more than 60 countries.

The Pennsylvania Turnpike Traffic Operations Center oversees 62 toll stops on 545 miles of roadway.

AEgis TECHNOLOGIES

PROTECTING THE EYES OF PILOTS

The AEgis Technologies Microsystems Group was awarded a Small Business Innovative Research (SBIR) contract with the U.S. Air Force for new laser eye protection technology for visors.

The project will be led by AEgis Chief Scientist Dr. Milan Buncick, and team members will include research physicist Neset Akozbek and biomedical engineer Carlos Kengla. Fabrication and testing will take place at AEgis and the University of Alabama in Huntsville, with whom AEgis has a joint partnership to develop nanophotonics.

Due to the availability of laser sources, continued and pulsed, over a broad range of wavelengths, laser eye protection has become increasingly important, and offers protection for helicopter pilots and others who fly close to the ground and is exposed to laser threats. The military uses many laser systems (e.g. training devices, range finders, target designators, communication devices) that emit potentially eye damaging radiation, and because personnel is exposed to these devices, there is a growing need for eye protection at a variety of wavelengths for both CS and pulsed sources.

The objective of the project is to develop transparent metallo-dielectric multilayer stacks that can be used as eye protection coating. AEgis is designing and constructing the multilayer stacks that block UV and IR light, while providing a high transparency window in the visible spectrum. These coatings will have sufficient optical density to protect the eye from damage caused by laser radiation in the UV and IR spectral regions.

During part of the Phase I effort, AEgis built and tested the stacks on both rigid and flexible subtrates in order to provide a variety of protection applications. For SBIR Phase II, AEgis will partner with Revision Eyewear of Essex Junction, Vt. for testing and development of manufacturing processes for incorporating the technology into protective eyewear for the military.