



PHOTO BY TAMMY SHRIVER

Josh Wise, senior innovation engineer for Global Science & Technology, demonstrates TOGO, a product under development by the company that uses mobile tagging technology. TOGO allows a consumer to go beyond the product and also launch into digital information about that product.



PHOTO BY TAMMY SHRIVER

Brian Bell, vice president and general manager of Global Science & Technology, gives a presentation at the Innovation Lab. The company won a contract with the National Oceanic and Atmospheric Administration's National Weather Service to create the Mobile Platform Environmental Data, or MoPED, system, which is one of GST's innovation campaigns.



PHOTO BY TAMMY SHRIVER

Chieh-san Cheng, president of Global Science & Technology Inc., addresses employees during a meeting at the company's new Innovation Lab, located in the Alan B. Mollohan Innovation Center in the I-79 Technology Park.

GST's MoPED will enhance weather forecasts

BY JESSICA BORDERS
TIMES WEST VIRGINIAN

FAIRMONT — Global Science & Technology Inc. is focusing on innovation and partnership.

GST recently won a large contract to create the Mobile Platform Environmental Data, or MoPED, system. As the prime contractor for this \$1 million project, GST will build an observation network for the National Oceanic and Atmospheric Administration's National Weather Service. The award was announced in September 2009.

"What this project does is it puts sensors on buses and commercial trucks to actually collect environmental collections data," Brian Bell, vice president and general manager of GST, said. "They'll be used as supplemental weather operations by the National Weather Service."

Today, the National Weather Service uses fixed locations at airports and other specified sites to do weather forecasts and reports, he said. The

ANNUAL REPORT
2010

10 Best Things

Mobile Platform Environmental Data (MoPED) system:

- Global Science & Technology Inc. is the prime contractor.
- Calmar Telematics and ManTech International are innovation partners.
- \$1 million project.
- Award announced in September 2009.
- Involves building an observation network for the National Oceanic and Atmospheric Administration's National Weather Service.

MoPED system allows the ability to fill critical gaps where those fixed stations are not currently located and will enhance weather predictions.

Bell explained that one of the company's partners — Calmar Telematics — was engaged in the Highway Visibility System,

which collected data related to traffic congestion and speed. The president of Calmar Telematics shared with Bell some of the data that was being gathered off of commercial trucks to basically monitor traffic flows.

Bell noticed that some environmental characteristics were coming from the trucks, and began thinking about the tractor trailers as mobile sensors that could be used to supplement data.

GST was able to take this data and transform it into accepted standards and weather observations, he said. Calmar Telematics and ManTech International are GST's innovation partners on the MoPED project.

The team just finished the critical design review, which means that the government approves its systems engineering approach for acquiring the data, Bell said.

"We have demonstrated that capability successfully," he said.

Bell said the first phase of this endeavor was to exchange

the data between the trucks and the MoPED system. The next stage is focusing on transferring the information from the MoPED system to the government data system, which is called the Meteorological Assimilation Data Ingest System (MADIS).

Josh Wise, senior innovation engineer for GST, said MoPED is a way to create better weather predictions and help people make more informed decisions when weather systems affect their travel plans.

"I think that you can see there are a lot of weather-related things always going on in the news, whether it be hurricanes or large snow storms," he said. "It's something that impacts everybody's day-to-day life."

The team sees the possibility of a commercial offspring of this contract once they demonstrate how the mobile platform data can assist with weather forecasts and predictions. For example, a person could subscribe to a product that would tell them about the weather a few miles ahead.

Bell said this would be a separate, private investment for GST. The company has already been in contact with several people interested in working with them on the commercial side.

With the MoPED contract award, GST will expand the concept for its new Innovation Laboratory. MoPED is one of several innovation campaigns that GST is working on.

"The Innovation Lab's focus is transforming data into information, so this falls really nice and neat within that theme of transforming environmental data into information weather," Bell said.

The lab is located in the Alan B. Mollohan Innovation Center in Fairmont overlooking the entire I-79 Technology Park. The team moved into the facility in February, and will hold a grand opening celebration on April 1 that they're calling "Innovation Fools' Day."

"I think the most unique part about it is that we're trying to bring our culture here that I certainly haven't seen around this area, which is to work in an

open environment and really try to foster communication and collaboration between people," Wise said.

Bell said the Innovation Lab is unlike any other office. The facility is wide open with no walls and there are several collaborative spaces. The lab's four focus areas are social and new media networks; mobile observing platforms; personalized content production; and collaborative business structures.

"The Innovation Lab is open to anyone who potentially has an interest in our theme in one of those focus areas, and we would love to consider any open innovation partnership," he said.

Efforts at the lab will involve small businesses as well as academia, Bell said. GST is currently negotiating an innovation campaign with the West Virginia Jobs Investment Trust Board, and already has a couple projects with West Virginia University.

For more information, visit ilab.gst.com.

E-mail Jessica Borders at jborders@timeswv.com.