

Tech Center News

31201 Chicago Road South
Warren, Michigan 48093

586-939-6800

Reader Input or feedback:
News@TechCenterNews.com
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William Springer II, publisher
and interim news editor;
Lisa A. Torretta, operations

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Senior Expo Set For This Month

The 16th annual Sterling Heights Regional Chamber of Commerce's Senior Expo for Macomb County residents will be held at the Sterling Heights Senior Activity Center on Thursday, Sept. 19, from 9 a.m. to noon.

The expo provides senior citizens and their caretakers with the chance to collect information about the variety of services and products that are available.

Speakers will talk about knowing when to go to emergency care and when to go to urgency care as well as how to prevent accidents at home.

There will be an old medication collection, vision screening, blood pressure checks, stroke screening, balance testing and hearing screening for seniors.

The Sterling Heights Senior Activity Center is at 40200 Utica Road. Event sponsors include DTE Energy, Shelby Nursing Home, Cherrywood Nursing and Living Center, HAP, the St. John Providence Health System, Sterling Van Dyke Credit Union, Villa Bella, Right Way Home Services and the Village of East Harbor.

BAE's SH Facility Tops in Communications

Developing Ground Combat Vehicles Main Focus, But Cutbacks Inevitable

by Jim Stickford

Recent federal budget problems could hit close to home, and even large defense contractors and the suppliers who serve them will not be immune to spending reductions.

That's the word from Mark Signorelli, vice president and general manager, Armored Combat Systems for BAE Systems.

Signorelli spoke to reporters at the company's Sterling Heights facility on Aug. 27. He said that BAE's Sterling Heights facility currently employs about 335 people and its primary activity is engineering, prototyping and program management for the company's Land and Armaments – Combat Vehicle Systems business, which is part of BAE's Armored Combat Systems.

The facility also provides support for the Armored Multiple Purpose Vehicle, the Bradley family of infantry fighting vehicles, the M88 Hercules, and the M109 Paladin Integrated Management vehicle. Employees at the facility also develop the next-generation Ground Combat Vehicle (GCV), whichever that is as time goes on.

The facility has its own quarter-mile test track, which is the closest track to the Army's TACOM facility down the road in Warren.

"This is a great facility," Signorelli said. "It's set up for flexibility and a distributed workforce," which he said in this case is a group of engineers who can communicate in real time with engineers at other facilities around the country.

Trying to move all the engineers to one facility, he said, would be costly.

So by having a modern site like the one in Sterling Heights, BAE

Systems is able to take advantage of the company's expertise at other sites.

He said the days of specialization are here and that fighting ground vehicles now require experts in other fields to make them the best vehicles in the world.

Signorelli added that the building is modern in ways besides communications technology. It's energy-efficient and has become a "zero landfill" facility.

And the facility depends on 46 local suppliers to provide the material it needs for its research, Signorelli said.

"Many of our suppliers are small local businesses," he said. "There's a perception out there that small businesses that can serve as defense suppliers are plentiful and are like commodities – easily replaced. That's not been my experience."

"There are a lot of processes that small businesses have to go through to be defense suppliers and when we lose one, it's tough on our customers to find a replacement business."

"We want people to understand the challenges that go with starting and stopping vehicle development."

The businesses that BAE depends on might not be there in the military supply business in a few years when a production line might start again, Signorelli said.

"Unfortunately, I think cutbacks are inevitable," Signorelli said. "We've managed to 'fix' the 2014 budget, but there are problems with 2015, 2016 and 2017. I



The Bradley M2A3 combat vehicle at BAE's Sterling Heights test track

don't think we've seen the impact of sequestration just yet, but when we do, the impact will be compounded."

Deepak Bazaz, who is leading the design and development for the GCV for BAE Systems, said the GCV is part of a modernization thrust by the U.S. Army.

The military has learned a lot about what works in modern combat over the past decade, he said, and the BAE engineers would like to see that hard-earned knowledge in new vehicles.

Bazaz said the Bradley infantry fighting vehicle goes back to the 1980s and that the military would like the GCV to carry a squad of nine instead of the Bradley's seven and provide better protection from IEDs and other anti-vehicle weapons.

Bazaz said the GCV is now in the technology development

stage, which is followed by the engineering and manufacturing phase.

SAE uses what Bazaz calls a "hotbuck" system to test the various components such as drivetrain, engine and such. By using a dynamometer, the engineers can test systems before combining them into a prototype platform. Bazaz would like to see the GCV use some sort of electric-hybrid technology.

Signorelli said the Sterling Heights facility is a modern site that uses the latest technology to create the systems American warfighters need to protect the country.

Right now, budget cuts are inevitable, he said, but hopefully they will be done in a way that won't unduly harm the way technology is developed to protect soldiers.

Defense Contractors Team Up for Demo

General Dynamics Land Systems Maneuver Collaboration Center (mc2), NextEnergy and TM3 Systems successfully completed a microgrid technology demonstration in July at General Dynamics Land Systems' headquarters in Sterling Heights.

The collaboration used a General Dynamics Land Systems' Electric Drive (eDrive) 8x8 armored vehicle and a Tactical Modular Mobile MicroGrid (TM3) power system from Royal Oak-based startup TM3 Systems to enable remote power generation and distribution.

In this demonstration, the eDrive vehicle's propulsion system generated electricity that was exported to a modified prototype microgrid system built by TM3 Systems.

The microgrid system then stores, converts and distributes the appropriate power output required to support remote military installations and disaster relief efforts.

"Since 2012, NextEnergy and

mc2 have collaborated on a number of activities to accelerate innovation of vehicle development for defense applications," said Jean Redfield, president and CEO, NextEnergy. "With support from the Michigan Economic Development Corporation, we established a new program to integrate the TM3 Systems technology with the eDrive vehicle to accelerate the delivery and improve management of grid quality power."

"General Dynamics' Maneuver Collaboration Center is about firsts – first in collaboration and first in innovation," said Sonya Sepahban, senior vice president, engineering, development and technology for General Dynamics Land Systems.

"This initiative between a small startup, a not-for-profit and a large defense contractor – to integrate an energy-conserving technology on an accelerated development schedule – is certainly a first for the community and a great business model we intend

to replicate," added Sepahban.

"This collaboration was a great opportunity to demonstrate what can happen when an industry leader like General Dynamics Land Systems leverages the unique capabilities of mc2 to collaborate with innovative organizations like TM3 Systems and NextEnergy," said Nate Lowery, CEO, TM3 Systems.

"We were able to leverage the strengths of all parties to demonstrate a sophisticated solution in a short period of time and are grateful to the MEDC for its support and to NextEnergy for bringing the team together."

The team successfully powered a command center during the 100-year anniversary of Camp Grayling on July 20 in Grayling. Camp Grayling provided an ideal environment to showcase the mobile microgrid capabilities and demonstrate how the product can help minimize logistics within deployments and support critical humanitarian and disaster relief efforts.

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SEPTEMBER

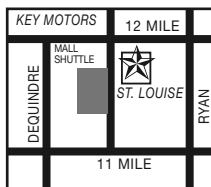
6•7•8 fest 2013

– ENTERTAINMENT –

FRIDAY	SATURDAY	SUNDAY
Soul Provider L.L.C.	The Varitones 1pm till 5:pm	The Coachmen 2pm till 7pm
Classic Rock, Motown & Dance 6pm till 10pm	The Polish Muslims 6pm till 10pm	GRAND PRIZE DRAWINGS 7:30 PM
VEGAS 6PM-CLOSE BINGO 6PM-11PM	VEGAS 5PM-CLOSE BINGO 3PM-11PM	VEGAS 1PM-7PM BINGO 2PM-7PM

Main Raffle – Grand Prize \$3,000
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- Polish-Ethnic Food (Including Chicken Dinner Sunday)
- Dancing (Wooden Floor)
- Bake Shoppe
- Vegas
- Toy Chest (Prizes for boys & girls)
- Jackpot
- Polish-Lowicz Dancers (3pm-Sat. Sept 7)
- 50/50 (on the hour)
- Family Games
- Outdoor Café
- Inflatables
- Large Flea Market
- Country Store
- Beer Tent
- Cheer Booth



Additional Parking at KEY MOTOR MALL with Shuttle Service to the Sept. Fest