

FLIR is Developing Vehicle Technologies to Better Safeguard U.S. Troops

The defense contractor FLIR visited Sterling Heights recently to show off the company's integrated vehicle technology.

Scott Crizer, director of Army programs for FLIR, said they came to Sterling Heights to meet with different OEMs like General Dynamics, Navstar and Oshkosh, as well as representatives from TACOM. They were able to use offices located just down the street from the TACOM facility in Warren.

"We're demonstrating different integrated vehicle technologies, from acoustic to color camera infrared tech, which is used to see at night," Crizer said. "One of the key things our troops have said is important is force protection and situational awareness."

In order to achieve force protection, vehicles used by the military over the last decade have become more and more "buttoned up", said Troy Schweitzer, business development manager, OEM for FLIR.

"They want to have a chassis with no welding seams because the seam becomes the weakest point," Schweitzer said. "But the more buttoned up a vehicle is,

the harder it is to see out of it."

John Hodge, director of Army business development, surveillance, is a member of his national guard and just returned from a year's tour of duty in Afghanistan. He said that the year he spent riding around Kandahar in all kinds of different vehicles showed him that they had narrow fields of vision. The troops he spoke with said they wanted to see what was in the surrounding environment before they left the vehicle.

Jumping out of the back of a Bradley troop carrier blind isn't the best way to enter combat, Hodge said.

So Hodge has been able to combine his military service and experience with his "day" job at FLIR by helping develop a common operating system that uses networked and integrated visual and acoustic sensors to survey the local environment.

The front-seat passenger is able to use touch technology similar to what is now used in smartphones and tablets to view the incoming data. This information can now be shared with the next vehicle, or be sent to the local headquarters or

even the headquarters at the next town over.

"We've been working on this for years," Hodge said. "We started to understand eight or nine years ago the importance of force protection. What we've done is do 'spiral' development. That's taking the technology used to protect bases and put it in smaller and smaller packages so that it can now be installed in vehicles."

Schweitzer said improvements in size have made a difference. Back in the 1990s, they had to use large tanks that contained liquid nitrogen to cool down the visual detectors to such a degree that they could work optimally in providing visual clarity. Now, they are able to use much smaller cooling tanks.

"We are demonstrating to OEMs and the Army what our capabilities are right now," Schweitzer said. "This tech has applications that can be used in all the vehicles in the Army's inventory."

To that end, FLIR has equipped a civilian 2006 Humvee with such systems as the ThermoVision SA-180, which offers a 180-degree field of view to provide situation-

al awareness. Two SA-180s can be coupled together to continuously monitor a 360-degree scene.

The Humvee has also been equipped by FLIR's ThermoVision SA40, SA63 and SA90 imagers, which can be mounted virtually anywhere on any vehicle to provide visual confirma-

tion of the area surrounding the vehicle. Multiple units can be mounted to provide wider angles of coverage from a single mounting point.

They also installed a TacFLIR 230 on the vehicle. This provides maximum sensor range performance using "a small package."



The defense contractor FLIR has made this civilian Humvee a demonstration vehicle to show off what its sensor technology can do now.

H.B. Stubbs Automotive Expertise Helps Company in Diversifying

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Diversifying just made good sense, Stubbs said, because if you looked at the company from an historical viewpoint, you would see it ebb and flow with the car industry.

Company officials made a conscious decision to branch out and seek business from other industries as a way of riding out the bad times that the auto industry periodically experiences.

Now they do shows for companies in such diverse industries as electronics, defense and medical.

"We took what we learned in the auto industry and applied it to other industries," Stubbs said. "This happened in the late 1990s and we were able to use this business to keep the company going during the slack times in the car business."

Stubbs' creative director Roe Peterhas said as a result of this work H.B. Stubbs is a much harder company to pigeonhole.

"That is unusual in this town and in this country," Peterhas said.

There are differences in putting on a display for Hyundai and one for Panasonic, for example.

The size of the displays might be relatively equal, Peterhas said. But while the Hyundai display only has to sell a handful of products, the Panasonic display might have to show off 500 different products.

"You have to tell a more complex

story for Panasonic," Stubbs said.

Roe added that with some companies that have 500 different products, there will be more managers, but the company that puts on the display still has to take all that fragmented information and make it a cohesive whole that tells the story the client wants to tell.

Putting on displays, whether it's an auto display or one for an electronics company, is more difficult now, Stubbs said. Companies such as his need to have experts in such diverse fields as construction, logistics and electronics. Today's displays heavily use electronics.

And being diversified means having clients based all over the country and all over the world.

Company officials recently convinced the German auto supplier ZF to let Stubbs handle their work in the United States.

Till then, the ZF was using a German company for all their work.

Having Panasonic as a client means working with people in four time zones based in five different locations around the world. So Stubbs adapted and now has a state-of-the-art hi-def video conferencing system.

"We are creative and production partners with our clients,"

Stubbs said. "The future can never be diversified enough. We are always in a business development mode. We ask ourselves, how can we remain relevant in a constantly changing world. Nothing stays the same."

The result is that they have to maintain two perspectives, said Stubbs.

There's the company's internal perspective - how can they rein-

vent the business and find more efficient ways to do things.

Then there is the external perspective. How can they put innovation in front of the clients to meet the clients' changing needs.

In this competitive world, adaptation becomes a way of life. And H.B. Stubbs has always been adaptable.

That goes back to the very beginning of the company.

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