

# Counter-drone tech tackles more than just drones

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**MUCH** of the hype at Land Forces focused on the various drones hanging over stalls, racing through obstacle courses, or weaving their way in between unaware delegates.

Less flashy were the counter-drone solutions on show, although by no means less interesting. Department 13, an ASX-listed company partnered with Brisbane-based EPE, launched the first mobile prototype of its Mesmer counter-drone technology.

D13 worked with EPE and Thales to develop the system and fully integrate the prototype into a command-variant Bushmaster on display. Mesmer software operates on the Bushmaster's Electronic Warfare Platform, which is one of the mission systems equipment and integration capabilities that Thales offers in the vehicles.

"I am very pleased to be able to announce the integration of Mesmer onto a mobile platform," Jonathan Hunter, Chairman and CEO of D13, said. "This comes as the result of a collaborative effort, with D13, EPE and Thales Australia."

The mobile integration on Australian Bushmasters comes on the back of a num-

ber of successes for D13's technology, which recently came third out of 450 in the US Special Operations Command's ThunderDrone II competition.

ADM was on hand to talk to D13's CTO and founder Robi Sen and co-founder Ben Smith about how Mesmer is countering the threat posed by the proliferation of drones and other technologies on the modern battlefield.

"The basic question is, can we trick electronics into doing what we want?" Sen said.

In short, yes. The system works by taking advantage of the common protocols systems use to communicate over networked links.

Unusually for counter-UAS technology, Mesmer uses less than one watt of power.

"Most jammers are unhealthy to be around," Smith said. "Bleeding from the nose, sterility, that kind of thing. Not good. This thing? I can stick the antenna in my mouth and I'll be fine."



The Mesmer counter-drone software operated from inside a Bushmaster at Land Forces.

Mesmer, however, is only one part of a much bigger story. With the aid of improvements in machine learning, D13 aims to eventually use the technology to protect soldiers from robots, self-driving vehicles, and Internet of Things devices.

"We have a system that we're going to be slowly integrating that uses machine learning," Sen said. "You feed it signals and it figures everything out." ■