Next-Generation Electronic Warfare Development Targets Fully Adaptive Threat Response Technology

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When U.S pilots encounter enemy air defenses, onboard electronic warfare (EW) systems protect them by interfering with incoming radar signals – a technique known as electronic attack (EA) or jamming. Conversely, electronic protection (EP) technology prevents hostile forces from using EA methods to disable U.S. radar equipment assets.

Defeating hostile radar helps shield aircraft from ground-to-air missiles and other threats, so it's a military priority to ensure that EW systems can defeat any opposing radar technology.

At the Georgia Tech Research Institute (GTRI) [1], which has supported U.S. electronic warfare capabilities for decades, a research team is developing a new generation of advanced radio frequency (RF) jammer technology. The project, known as Angry Kitten, is utilizing commercial electronics, custom hardware development, novel machine-learning software and a unique test bed to evaluate unprecedented levels of adaptability in EW technology. Angry Kitten has been internally funded by GTRI to investigate advanced methods that can counter increasingly sophisticated EW threats.

"We're developing fully adaptive and autonomous capabilities that aren't currently available in jammers," said research engineer Stan Sutphin. "We believe a cognitive electronic warfare approach, based on machine-learning algorithms and sophisticated hardware, will result in threat-response systems that offer

significantly higher levels of electronic attack and electronic protection capabilities, and will provide enhanced security for U.S. combat aircraft."

Click here to read the full article [2].

For more information visit http://www.gtri.gatech.edu/ [1].

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