



At Robot Show, Future of Warfare Is on Display

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DENVER (Aug. 27) -- From robotic insects that can crawl and fly to spy drones that look and move like real hummingbirds, the future of warfare was on display this week at a massive robotic conference here.

This year's [Association of Unmanned Vehicle Systems International](#) show attracted more than 6,000 visitors --- well above what organizers expected. But perhaps more striking than the number of visitors was the diversity of military and civilian robots and drones on display.

Once it was considered a niche market, but the demand for unmanned aircraft and robots has boomed in Afghanistan and Iraq. The military in recent years has deployed thousands of bomb-clearing robots and unmanned aircraft of every shape and size, and law enforcement agencies are also buying up some of the technologies.



Sharon Weinberger for AOL News

AeroVironment's nano-UAVs include one that looks and flies like a real hummingbird and could be used for spying in buildings. The drone is still in the research stage.

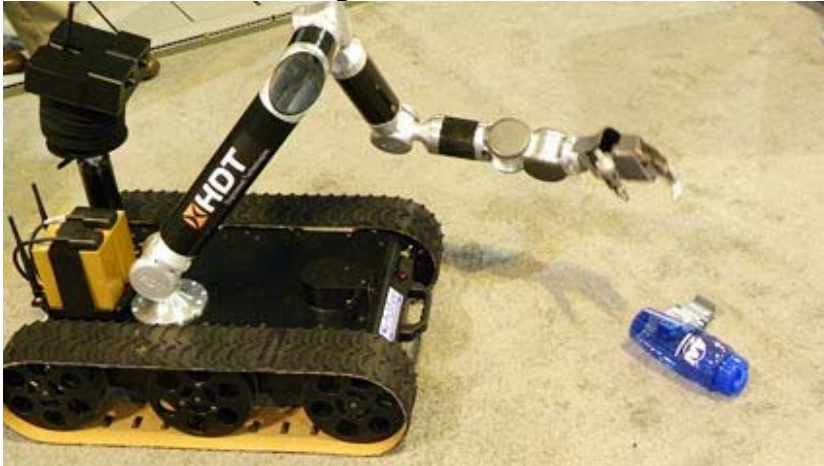
Military labs and companies showcased some of their far-out concepts, like robotic insects and birds, while others highlighted robots that are already on the battlefield. Drones like the Predator and Global Hawk are longstanding staples of the drone world, but now companies are focusing more on future aircraft concepts.

Defense giant Lockheed Martin revealed its "MPLE" (pronounced "maple") aircraft at the show, a spy drone that can fly for up to five days straight. The company says the multipurpose drone could be used to track pirates and look out for roadside bombs, among other missions.

For many companies still in the conceptual phase of building unmanned systems, finding someone to sponsor

their projects and build a working aircraft is challenging. One company, LaserMotive, is pitching unmanned aerial vehicles powered by beamed lasers, a novel concept that would, at least in theory, help overcome some of the power limitations of current drones.

Frontline Aerospace, another small aerospace firm, brought a mock-up of its V-Star aircraft to the show, a vertical takeoff-and-landing vehicle with an unusual diamond-box wing and ducted fan engines.



Sharon Weinberger for AOL News

HDT Engineered Technologies demonstrates its robotic arm that can grasp objects -- in this case, a free water bottle being distributed at the conference.

"We think we have the better mousetrap," Ryan Wood, the company's president and CEO, told AOL News.

The aircraft could be used for supplying troops, or be reconfigured to carry weapons or spy sensors. Wood said the company, which recently pitched the idea to the Defense Intelligence Agency, could build the aircraft in just 28 months with \$19 million.

For the time being, however, Frontline Aerospace is continuing to work on the aircraft on its own dime.

Some of the concepts are still only in the PowerPoint phase. William Fredericks, an engineer at NASA's Langley Research Center, presented a study of a concept for a vertical takeoff-and-landing vehicle that could stay aloft for 24 hours and launch from elevations up to 15,000 feet.

The study, which Fredericks said proved such an aircraft was theoretically feasible, was performed for "another government agency," giving an aura of secrecy to the idea (and the possibility that the CIA, which has also invested heavily in drones, is involved).

Asked which agency has sponsored the study, Fredericks replied: "I can't really talk about that one, sorry."