



Aerospace technology of the highest order was on display at AFA's annual showcase.

Hardware, software, and integration concepts tailored for the Air Force's enduring and emerging missions greeted visitors to AFA's 2012 Technology Exposition, along with an array of personal protection equipment and services for USAF personnel. **1** Making his first visit to the expo as Chief of Staff, Gen. Mark Welsh III gets a briefing from Boeing Vice President Jack Catton. **2** Air Force Secretary Michael Donley, flanked by Douglas Raaberg of Northrop Grumman and AFA Board Chairman Sandy Schlitt (r), opens the technology expo. **3** MBDA displayed a trio of dual-mode Brimstone missiles—derived from the Hellfire—as potential armament for remotely piloted aircraft. **4** An artillery shell damaged by a high-power laser was one of the test artifacts displayed by the Air Force Research Lab.



Exposition 2012

Photos by Guy Aceto



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111 Andrew Martin of Martin-Baker explains the F-35 ejection seat to CMSgt. Larry Malcolm, command chief master sergeant of the 2nd Bomb Wing. 121 It's BATMAN—the Battlefield Air Targeting Man-aided knowledge system, modeled by Air Force Materiel Command's Greg Burnett. The ensemble is a response to joint terminal attack controller requests for an integrated field system. 131 This cutaway of the historic Type I-A engine—which powered the first US jet fighter, the XP-59—was featured at General Electric's booth. 141 This flying car concept is being pursued by Carter Aviation Technologies and AAI.



111 Not a black ice shelter, this igloo at the Cubic Defense Applications booth is a portable simulation dome called a Joint Fires Integrated Training Environment. It can link with other domes for a variety of training exercises. **121** A model of the A400M Grizzly, a developmental airlifter sized between a C-130J-30 and a C-17, wore Air Force colors at EADS' booth. **131** Duke Ku, an air attaché and F-16 pilot from the Republic of Taiwan, gets a briefing from Emanuele Cassan on Alenia Aermacchi's T-100 training system.



141 Dogs of the Warrior Canine Connection earned smiles and pats as they were walked around the expo. Troops who have post-traumatic stress disorder train the pups to become service dogs for mobility-impaired veterans.





111 Siemens, mindful that USAF is increasingly energy cost-conscious, showcased an all-electric, plug-in car at its booth. 121 An upgraded-F-15 model, with an impressive load of air-to-air, air-to-ground, air-to-ship, and anti-radar munitions, and an AESA radar, graced Boeing's display. Behind is the KC-46 tanker systems trailer.



131 Gen. Janet Wolfenbarger, head of Air Force Materiel Command and the first female USAF four-star, visits the SAIC booth. Watching a brief with her is Charles Heflebower of SAIC. 141 From the Tobyhanna Army Depot came this Humvee carrying a

Lightweight Counter-Mortar Radar, to be used in base defense operations. The system spots mortar rounds and is able to determine where they came from, assisting in the timely interdiction of the attackers.

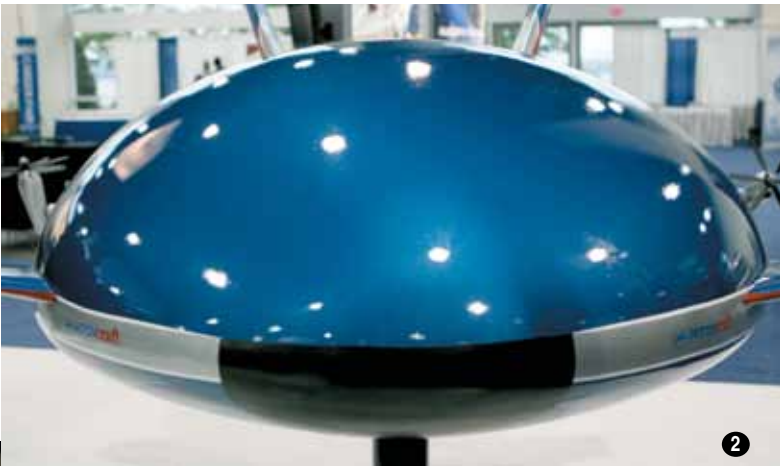


111 AgustaWestland's AW-101 offering for a new Air Force support helicopter was available as a walk-through mockup, bristling with weapons. *121* AAI's display featured two full-scale remotely piloted aircraft overhead: the Shadow M2 and, below it, the smaller, modular Model 229.



131 Mick Guthals of Textron demonstrates the BattleHawk squad-level loitering munition to CMSgt. Brian Hornback, command chief for Air Force Global Strike Command. *141* The seeker head of a Russian-made Archer air-to-air missile shows the effects of an energy beam fired in a test. AFRL showed a number of artifacts from tests of directed energy weapons.





1 A Lockheed Martin model shows how its “Cuda” concept for a small AMRAAM-class radar guided dogfight missile could triple the air-to-air internal loadout on an F-35. The missile is about the size of a Small Diameter Bomb and fits on an SDB-style rack. **2** Aeroscraft offered a glimpse of a possible future airship with this model. Airship concepts are gaining interest for loitering relays, ISR, or lift. **3** Michael Wooley, with ATK, speaks to Brig. Gen. Marshall Webb, director of plans, programs, requirements, and assessments, at Air Force Special Operations Command. **4** BAE Systems is making a push for the upcoming T-X competition with a variant of its Hawk trainer. The expo was well-attended by USAF airmen, ranging from junior enlisted to general officers. Many senior Air Force leaders made several trips through the exhibit hall. ■