Boeing Laser System Redeploys Quickly, Then Tracks Targets and Fires Laser

ALBUQUERQUE, N.M., March 24, 2009 -- Boeing [NYSE: BA] has successfully demonstrated its Re-Deployable High-Energy Laser System (RHELS) by quickly relocating the prototype weapon system from its Albuquerque development site to a test range, where it tracked ground and airborne targets and fired at a ground target.

RHELS integrates a solid-state, thin-disk laser; an acquisition, pointing and tracking capability; beam control, fire control and thermal management systems; and a weapons operator console into a modified 40-foot-long shipping container transportable on a semitrailer.

Boeing began the two-week-long test Feb. 23 by packing up RHELS at its Albuquerque facility, moving it to a local government facility in Albuquerque and setting it up there, all in only a few hours. With the system status re-established, RHELS then tracked in-flight aircraft and moving and stationary ground vehicles, and successfully fired its laser, hitting a remote target board on the ground. Due to test-range restrictions, the system did not fire at moving targets.

"RHELS demonstrates that a solid-state, high-energy laser weapon system can be transportable, rugged, supportable and affordable," said Gary Fitzmire, vice president and program director of Boeing Directed Energy Systems. "RHELS drives tactical directed-energy laser systems out of the laboratory and into the hands of the warfighter. Its transportability also means developers and warfighters have the opportunity to test this transformational, ultra-precision directed-energy weapon system at a number of ranges under varying conditions and against a diverse set of targets."

In future tests, RHELS will fire its laser at in-flight targets and moving ground vehicles. RHELS is designed to engage rocket, artillery and mortar (RAM) projectiles, shoulder-fired missiles and unmanned aircraft, as well as a variety of ground-mobile tactical targets.

RHELS is a Boeing-funded initiative to show that directed energy weapons are maturing and are relevant to today's battlefield. It also provides key lessons for the High Energy Laser Technology Demonstrator (HEL TD), a truck-mounted, high-energy laser, counter-RAM weapon system that Boeing is developing for the U.S. Army.

"RHELS reduces risk for HEL TD in a controlled but realistic setting," said Lee Gutheinz, Boeing program director for High-Energy Laser/Electro-Optical Systems. "It confirms the functionality of a compact, reliable and highly efficient laser system while maintaining future scalability to many tens of kilowatts of laser power."

Boeing leads the way in developing high-energy laser systems for a variety of warfighter applications. These systems include Airborne Laser, Advanced Tactical Laser, HEL TD, Laser Avenger and the Tactical Relay Mirror System.

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Contact Info:
Marc Selinger
Boeing Missile Defense Systems
(703) 414-6138
marc.selinger@boeing.com
Chuck Cadena
Boeing Missile Defense Systems
(703) 872-4503
chuck.cadena@boeing.com