



Northrop Grumman to Continue Development of GPS-Free Inertial Navigation System

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WOODLAND HILLS, Calif., Oct. 5, 2009 (GLOBE NEWSWIRE) -- Northrop Grumman Corporation (NYSE:NOC) has received a contract modification from the U.S. Department of Defense to further demonstrate a revolutionary advance in inertial navigation. The demonstration project makes use of traditional electro-optic (EO) cameras, atomic clocks, and advanced vision processing technologies to provide inertial navigation system (INS) updates to aircraft, ground vehicles and ground troops without the need for continuous Global Positioning System (GPS) input to maintain precise position and time.

Called LEGAND, for LADAR EO GPS/INS atomic clock navigation demonstration, the project aims to provide ground troops, aircraft, and ground vehicles the capability to maintain precision navigation in places not currently possible due to challenged or denied access to GPS, thus sustaining their operations. The LEGAND system processes visual motion observations to provide INS updates while the atomic clock maintains time synchronization, providing users precision navigation while rapidly re-acquiring partial or complete GPS input.

"When GPS access is denied our warfighters in urban or indoor environments, they are often unable to maintain mission engagement. This inability to update the inertial navigation system with GPS causes a gradual loss of its precision navigation capability resulting in mission degradation or cancellation," said Gorik Hossepian, vice president of Navigation and Positioning Systems for Northrop Grumman's Navigation Systems Division. "This translates into less time focused on potential hostile targets of interest."

Hossepian noted that LEGAND's small size, weight and power requirements make it highly adaptable to current unmanned aircraft and will provide ground commanders critical battlespace awareness. "The innovative inertial navigation system can also benefit individual soldiers operating in remote areas on the ground," he added.

Two successful studies of the core LEGAND technologies were completed by Northrop Grumman in September 2008 and February 2009 and the current demonstration hardware development phase funded by this contract modification is expected to continue through September 2010.

Northrop Grumman Corporation is a global defense and technology company whose 120,000 employees provide innovative systems, products, and solutions in information and services, electronics, aerospace and shipbuilding to government and commercial customers worldwide.

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