Ball Aerospace, Lockheed Martin Demonstrate New Docking System Technology

Orion Hardware to be Flown and Tested Aboard NASA's Last Shuttle Mission, STS-134

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Ball Aerospace & Technologies Corp., Lockheed Martin Space Systems Company and NASA conducted a successful technology demonstration of an inventive navigation system that will make docking operations safer and easier for spacecraft flying to the International Space Station (ISS). The demonstration that took place at the Ball facility in Boulder, Colo., showcased the dynamic nature of the sensors by simulating crewed and uncrewed docking operations.

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This docking navigation system prototype was developed collaboratively by NASA, Ball and Lockheed Martin and will be tested by astronauts aboard STS-134 in an unprecedented on-orbit maneuver during the space shuttle mission to the ISS in February 2011 as part of the Sensor Test for Orion Relative Navigation Risk Mitigation (STORRM) Development Test Objective (DTO). On Flight Day 11 of the mission, the shuttle crew will undock from the ISS and then re-rendezvous with the station on an Orion-like approach.

NASA's Orion crew exploration vehicle is at the peak of its development phase, which has spurred several new technologies and innovations in composites, structures, thermal protection systems, avionics and navigation systems. Because of its capability to determine shapes, intensity, and distance, STORRM's sensing technology may also improve a variety of Earth-bound applications such as terrain mapping, deforestation monitoring and transportation hazardous avoidance systems.

STORRM's hardware consists of two sensors: the eye-safe flash LiDAR Vision Navigation Sensor (VNS) and the high definition Docking Camera (DC) developed by Ball, as well as avionics and flight software developed by NASA Langley Research Center. Both sensors will be used on the Orion spacecraft to provide real-time three-dimensional images to the crew with a resolution 16 times higher than the current shuttle sensors. This next generation system also provides data from as far away as three miles -- three times the range of the shuttle docking system. The single-system design provides the required docking accuracy and range capability necessary to meet Orion's crew safety, mass, volume and power constraints.

"The effective demonstration of Ball's VNS and DC on the ground makes us all the more eager to see the STS-134 astronauts test the system aboard Endeavour," said David L. Taylor, president and CEO of Ball Aerospace.

The STORRM sensing functions that will be demonstrated during docking, undocking and re-rendezvous operations on STS-134 have been identified as a critical technology needed for space exploration missions of the future. During STS-134, data will be collected and the crew members will be able to monitor the data through the STORRM software application on a computer. In addition, screen snapshots of the data will be sent to mission control by S-Band video for the STORRM team to evaluate during the mission.

"This innovative technology enhances the Orion team's ability to significantly improve crew safety for human space flight," said Larry Price, Orion deputy program manager for Lockheed Martin. "Once proven successful on orbit, this system will enable us to continue on our path forward to safely fly Orion in 2013."

Lockheed Martin is the prime contractor to NASA for the Orion Project and leads the industry team that includes major subcontractors as well as a network of minor subcontractors and small businesses working at 88 facilities in 28 states. In addition, the program contracts with more than 500 small businesses across the United States through its expansive supply chain network.

Headquartered in Bethesda, Md., Lockheed Martinis a global security company that employs about 136,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation reported 2009 sales of $45.2 billion.
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Ball Corporation is a supplier of high-quality metal and plastic packaging for beverage, food and household products customers, and of aerospace and other technologies and services, primarily for the U.S. government. Ball Corporation and its subsidiaries employ more than 14,000 people worldwide and reported 2009 sales of more than $7.3 billion.

Forward-Looking Statements

This release contains "forward-looking" statements concerning future events and financial performance. Words such as "expects," "anticipates," "estimates" and similar expressions are intended to identify forward-looking statements. Such statements are subject to risks and uncertainties which could cause actual results to differ materially from those expressed or implied. The company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Key risks and uncertainties are summarized in filings with the Securities and Exchange Commission, including Exhibit 99.2 in our Form 10-K, which are available at our Web site and at www.sec.gov. Factors that might affect our packaging segments include fluctuation in product demand and preferences; availability and cost of raw materials; competitive packaging availability, pricing and substitution; changes in climate and weather; crop yields; competitive activity; failure to achieve anticipated productivity improvements or production cost reductions; mandatory deposit or other restrictive packaging laws; changes in major customer or supplier contracts or loss of a major customer or supplier; and changes in foreign exchange rates or tax rates. Factors that might affect our aerospace segment include: funding, authorization, availability and returns of government and commercial contracts; and delays, extensions and technical uncertainties affecting segment contracts. Factors that might affect the company as a whole include those listed plus: accounting changes; changes in senior management; the current global recession and its effects on liquidity, credit risk, asset values and the economy; successful or unsuccessful acquisitions, joint ventures or divestitures; integration of recently acquired businesses; regulatory action or laws including tax, environmental, health and workplace safety, including in respect of climate change, or chemicals or substances used in raw materials or in the manufacturing process; governmental investigations; technological developments and innovations; goodwill impairment; antitrust, patent and other litigation; strikes; labor cost changes; rates of return projected and earned on assets of the company's defined benefit retirement plans; pension changes; reduced cash flow; interest rates affecting our debt; and changes to unaudited results due to statutory audits or other effects.

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