Incorporating Velodyne LiDAR's HDL-32E Sensor, OWL Technology from LSA Autonomy to Dramatically Transform Oversize Transport Industry

System Marks Major Leap Forward in Detection of Overhead Obstacles

MORGAN HILL, Calif. and WESTMINSTER, Md. (PRWEB) March 09, 2016 -- Velodyne LiDAR announced that it has collaborated with LSA Autonomy, which today unveiled the Overhead Wire Laser-Detector – the OWL – a 3D LiDAR sensor-based technology and software system that marks a quantum leap forward in the detection of overhead obstacles for oversize transports.

By applying LSA Autonomy's sensor processing software to Velodyne LiDAR's HDL-32E real-time 3D LiDAR sensor, the OWL detects any overhanging obstacle that might interfere with special transports of oversize objects. When clearances are insufficient, the system alerts the operator in real-time with audible and visual warnings, while providing photographic imaging for clarity.

Currently, transport companies use measured poles to determine whether an oversize load will be able to safely travel under a potential obstacle. Some companies have cars with telescopic poles attached to the front bumpers, while other companies have employees who walk while carrying poles of the necessary length.

"Logistically speaking, the OWL will have a transformative impact on the planning and actual transport of oversized loads," said Mike Grinnell, director of operations for LSA Autonomy. "The reductions of cost, time, and risk to people, product, infrastructure and reputation will be enormous."

"We see this essentially as the beginning of real-time 3D perception and detection," said David Oroshnik, Velodyne LiDAR director of technical solutions. "The OWL is one of the first products in the nascent sense-and-avoid market in which Velodyne LiDAR will be a key player. The Department of Transportation and every company that handles special transports of this nature will have to have one of these sensors on their roof, rather than trusting a guy with a stick to protect their million-dollar investments."

The OWL is magnetically mounted to the roof of a vehicle, then plugged into a laptop on the passenger side. A threshold is keyed in based on the height of the object being transported. The OWL then takes 32 measurements across the road 10 times per second, using millions of points of data to provide precise height measurements of any potential impediments.

The OWL system works at highway speeds, making it extremely valuable for pre-transport route surveys. However, when used for real-time alerting, the driver must travel at 25 miles per hour to allow for sufficient stopping time.

The OWL system was developed at the request of one of the world's leading advanced technology companies, after an incident in which an oversize transport caught a communication wire, snapping a telephone pole, bringing down a power line, which damaged a transport vehicle, causing a regional blackout and imperiling the lives of transport team members.

In its first use, when deployed in tandem with the traditional pole methodology, the OWL prevented an accident by alerting the transport driver to an obstruction that the lead poles failed to detect due to the crown of the road.

About LSA Autonomy
Since 2011, Land Sea Air Autonomy LLC (LSA Autonomy) has been dedicated to providing technically sound, affordable autonomous solutions to the toughest challenges. LSA Autonomy finds new ways to utilize technology, improve technology, and enable technology to work in fresh applications for new markets by applying its strong background in robotics and autonomy applications, embedded real-time control systems, and sensor processing. The company's roots lay in the engineering of autonomous vehicles for military applications through the integration of vehicles and sensors with its own hardware designs and software components. The resulting systems are based on modular, open systems architecture designs that are both adaptable and platform agnostic. LSA Autonomy leverages commercial off-the-shelf computers and sensors, where possible, to effectively manage life cycle costs without sacrificing reliability, maintainability, or availability. For more information, visit http://www.lsa2.com.

About Velodyne LiDAR
Founded in 1983 and based in California's Silicon Valley, Velodyne LiDAR Inc. is a technology company known worldwide for its real-time LiDAR (light detection and ranging) sensors. The company evolved after founder/inventor David Hall competed in the 2004-05 DARPA Grand Challenge using stereovision technology. Based on his experience during this challenge, Hall recognized the limitations of stereovision and developed the HDL-64 Solid-State Hybrid LiDAR sensor. Velodyne subsequently released its compact, lightweight HDL 32E sensor, available for many applications including UAVs, and the new VLP-16 LiDAR Puck, a 16-channel real-time LiDAR sensor that is both substantially smaller and dramatically less expensive than previous generation sensors. Market research firm Frost & Sullivan has honored the company and the VLP-16 with its 2015 North American Automotive ADAS (Advanced Driver Assistance System) Sensors Product Leadership Award. Since 2007, Velodyne LiDAR has emerged as the leading developer, manufacturer and supplier of real-time LiDAR sensor technology used in a variety of commercial applications including autonomous vehicles, vehicle safety systems, 3D mobile mapping, 3D aerial mapping and security. For more information, visit http://www.velodynelidar.com. For the latest information on new products and to receive Velodyne's newsletter, register here.

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