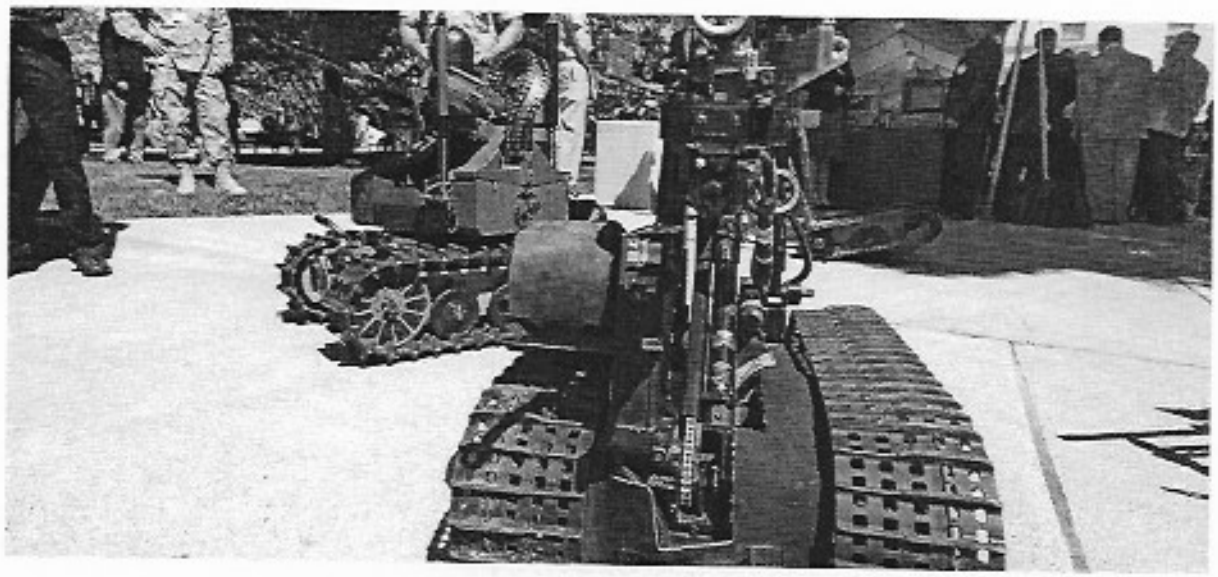


Autonomous Robots to Get Better LiDAR Tech

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A new detection technology was recently announced. Panasonic's new 3D LiDAR enables variable detection settings for viewing angles and scanning speed. This new product contributes to the widespread use of autonomous robots that navigate inside or outside facilities with moving objects, including people.

Suitable applications could be autonomous robots such as delivery robots; forklifts; agricultural machinery; construction machinery; and security systems.

According to the company's announcement on its website, the 3D LiDAR sensor accurately measures the direction of and distance to objects with a wide angle of view, which is critical for the autonomous operation of mobile robots. Employing Panasonic's proprietary laser-scanning technology, this 3D LiDAR is capable of scanning the laser as wide as up to 60 degrees vertically and 270 degrees horizontally to achieve stable operation of autonomous robots.

The wide scanning angle helps the detection of objects on the ground precisely as well as the roughness of the ground surface. In addition, the range of scanning angles and the resolution can be tailored precisely by adjusting the rotation angle and speed of the mirrors in the system. This feature gives users accuracy and flexibility to choose the most appropriate conditions for the measurement depending on their usage.

Additional features of the new technology include variable detection settings for viewing

angles and resolution in vertical, and an accurate detection under strong sunlight.

Autonomous robots need to detect the condition of the ground as well as the objects around them since they will be operated inside and/or outside facilities with many moving objects including people. Conventional 3D LiDARs that are designed for autonomous driving of automobiles cannot scan the laser in a wide range of vertical angles. Therefore, they cannot precisely detect the conditions of the ground. For this reason, conventional LiDARs need to be combined with other sensors that can detect the ground condition. This results in complicated configuration and the design of the autonomous robots.