

A news release was distributed today announcing that The U.S. Army Logistics Innovation Agency (LIA) hosted demonstrations at Fort Lee in Virginia of an **MIT-developed prototype unmanned robotic Toyota lift truck** capable of locating, lifting, moving and placing palletized supplies within an existing outdoor supply depot. The demonstration included review of the robot's safety features, sensor capabilities and human-robot interface based on voice and gesture commands.



The 3,000-pound capacity, internal combustion Toyota 8-Series lift truck was modified by researchers at MIT's Computer Science and Artificial Intelligence Laboratory to perform embodied speech and gesture understanding; shape estimation (from laser range scanner data); machine vision (from camera data); motion estimation (from GPS, inertial data and wheel odometry encoders); and autonomous mobility and pallet manipulation. Proprietary Controller Area Network (CAN-bus) protocols, provided by Toyota's 8-Series product engineering team, enabled the MIT team to connect its algorithms directly to the lift truck's manual and electrical controls.