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Title

uSMET: A Versatile Robot for On-road and Off-road Applications

Description and Anticipated Benefits

M-Vision Inc. has designed the first prototype of uSMET: a shape-adaptive unmanned teleoperated robot that can dynamically transition from a bicycle form factor to a tricycle form factor. The bicycle operating mode allows operation in narrow spaces, while the tricycle mode offers increased stability. The platform is intended to be small enough to hold a rucksack, ammunition, or a soldier but not be excessively laden with gear. The reduced platform weight and carrying capacity allow for increased speed. The category of a compact, lightweight, inconspicuous cargo-carrying robot, which reliably resupplies troops in an active combat zone, is currently not fulfilled by available designs. uSMET is intended to fill that niche. The uSMET platform would be able to fulfill several major battlefield roles for the Army: provide reliable last-mile resupply for units in a combat zone, bringing ammunition, medical kits, and other urgently needed consumables to soldiers in action, without requiring soldiers to make the dangerous journey back to their supply base (e.g., rally point) under enemy fire. uSMET can also be used for casevac missions - evacuating individual wounded soldiers back to a secure position for immediate medical treatment. Commercial applications include precision agriculture and last-mile delivery.

uSMET

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