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Here at Viewpoints, we have been following the development in unmanned vehicles with interest. Recently, the world's smallest helicopter has taken it's maiden flight, along with intriguing developments incorporating video gaming technology with Unmanned Ariel Vehicle (UAV) flight. But it's developments on the ground that caught our eye of late, with Boston Dynamics' BigDog a dynamically stable quadruped robot developed with Foster-Miller, the NASA Jet Propulsion Laboratory, and the Harvard University Concord Field Station and funded by the Defense Advanced Research Projects Agency (DARPA).

It is hoped that the robot will serve as a robotic pack mule to accompany soldiers in terrain too rough for conventional vehicles. Instead of wheels or treads, BigDog uses four legs for movement, allowing it to move across surfaces that would prove too difficult for wheels. The legs contain a variety of sensors, including joint position and ground contact. BigDog also features a laser gyroscope and a stereo vision system.

BigDog is 1 metre (3.3 ft) long, stands 0.7 metres (2.3 ft) tall, and weighs 75 kilograms (170 lb), about the size of a small mule. It is capable of traversing difficult terrain at 5.3 kilometres per hour (3.3 mph).Locomotion is controlled by an onboard computer that receives input from the robot's various sensors. Navigation and balance are also managed by the control system.

In a new video released it is shown to navigate difficult forest terrain, hold it's balance after being kicked and walk and recover on icy ground, as well as carry up to 400 lbs and climb a 35 degree incline.

Boston Dynamics state that their ultimate goal is creating robots that have rough-terrain mobility that can take them anywhere on Earth that people and animals can go.

Mind you, it sounds like a £5 solution to a 5 pence problem. Asymmetric fighters will still stick to long proven low cost self fuelling solutions - like the small mule....

UPDATE: Not to be outdone by BigDog, Hirose Fukushima Labs, a Japanese company is developing ACM-R%, an amphibious robot snake. Powered by a lithium-ion battery, the ACM-R5 is a radio-controlled amphibious robot designed to move like its real world counterpart. It can slither or swim underwater for 30 minutes on a full charge. Inside, you'll find an intricate sensor system (attitude/torque), small-sized camera, and a 32bit micro controller.

http://www.techeblog.com/index.php/tech-gadget/acm-r5-amphibious-snake-like-robot