BigDog

BigDog is a dynamically stable quadruped robot created in 2005 by Boston Dynamics with Foster-Miller, the NASA Jet Propulsion Laboratory, and the Harvard University Concord Field Station. It was funded by DARPA, but the project was shelved after the BigDog was deemed too loud for combat

Discontinuation & Hardware

At the end of December 2015, the BigDog project was discontinued. Despite hopes that it would one day work as a pack mule for US soldiers in the field, the petrol-powered engine was deemed too noisy for use in combat. A similar project for an all-electric robot named Spot was much quieter, but could only carry 40 pounds (18 kg). Both projects are no longer in progress. The Spot Mini is now in progress of being built.

BigDog is powered by a two-stroke, one-cylinder, 15-brake-horsepower (11 kW) go-kart engine operating at over 9,000 RPM. The engine drives a hydraulic pump, which in turn drives the hydraulic leg actuators Each leg has four actuators (two for the hip joint, and one each for the knee and ankle joints), for a total of 16. Each actuator unit consists of a hydraulic cylinder, servo valve, position sensor, and force sensor.

Onboard computing power is a ruggedized PC/104 board stack with a Pentium 4 class computer running QNX.

Presentation was made by:

Matvey Yarmak

&

Egor Vihrov