

SwagBot being tested as a possible replacement for the cowboy

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SwagBot

(Tech Xplore)—The University of Sydney's Centre for Field Robotics has begun field testing SwagBot, a robot that is meant to serve the traditional role of a cowboy. It has a simple design—a silver box set atop four long legs with wheels for feet. It is battery operated and has a camera for remote operation. For now, it has two main jobs: handling animals and hauling things around.

SwagBot has a hook on the back that allows it to pull around other equipment, which means it can be used to move feed from the barn to the field, for example. But it is clear that the [primary purpose of the robot](#) is to monitor and work animals such as horses and cows in a manner similar to a herding dog. It offers an impressive presence and makes a lot of noise, allowing it to grab and hold the attention of the animals it is meant to mind.

In order to allow it to do the job of a man on horseback (or modern ATV) the robot has independent all-wheel drive that allows for obstacle and extreme terrain traversal—it can climb right over small trees that have fallen or rocks if need be. It can also climb embankments. All-wheel drive also helps it move through mud and flooded roads without getting stuck. Engineers have also added

an extremely rugged chassis to make sure it will not break apart while out in the field and they also made the robot waterproof.

For now, SwagBot is operated remotely, either by direct line of sight or by using it in conjunction with a drone. In addition to watching the herd, the robot is also able to help monitor the terrain, allowing remote checking of invasive plants and weeds. It can also be used to check fences and to help with other chores around the farm.

The goal set by the project team is to someday allow SwagBot to work autonomously when in the field by teaching it to herd. They also plan to add sensors that can be used to monitor environmental conditions that would allow the [robot](#) to either solve problems, such as killing weeds or identifying sick or injured animals, or to call for help.

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