



The capstone team navigates the Terrazzo with the robot dog.

DOGGONE IT!

As cadets walk to class inside Fairchild Hall these days, they might encounter something unexpected. Frequently rounding the corner is a mechanical robot that resembles a four-legged dog.

It barks on command, rights itself when knocked over and adjusts its pace when conditions are slippery. The unit can actually swim, power through snowdrifts and run at a decent clip.

The Vision 60 is an all-weather ground drone that is being studied by Firsties in a senior capstone class. The technology was acquired by the Warfighter Effectiveness Research Center in December for \$160,000 (which includes a hefty warranty plan).

C1C Cameryn McKinnell, C1C Hunter Hughes and C1C Justin Harmon are studying the human factors implications of the emerging technology. That team is working with the 10th Air Base Wing Security Forces and others to explore ways the robot could be used within the military and at USAFA.



(From left) C1C Hunter Hughes, C1C Justin Harmon and C1C Cameryn McKinnell pose with the dog. (Photos by Ryan Hall)

According to Hughes, the robot can function as a drone, with an operator determining movements and direction. It can also be set up on an autonomous loop, so it can patrol specified areas or conduct certain labor-intensive tasks.

"It's crazy how much you can do with it," McKinnell suggests. "It has so much potential."

Harmon is focusing on future technology upgrades for the robot, includ-

ing incorporating virtual-reality or augmented-reality headsets for control of the dog.

"The opportunities are really endless," Harmon says. "It's been a blast for me to be a part of this."

A separate systems engineering team — which includes C1C Tory Bartlett, C1C Micah Treptau and C1C Leslie Cunamay — is studying such things as battery life, range and potential attachments that might assist the future warfighter.

Those happening upon the machine on the Terrazzo or in the halls exhibit a wide range of reactions, the capstone cadets report. Some find the dog creepy, others laugh.

According to Lt. Col. Walliser '05, director of the Warfighter Effectiveness Research Center, the cadets are quickly evaluating the potential uses for the dog. And because many are experienced gamers and drone operators, the cadets easily pick up the operation of the dog. 