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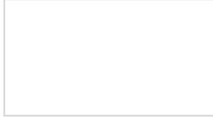
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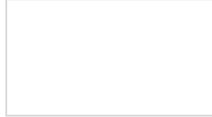
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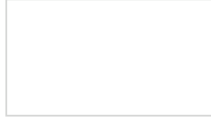


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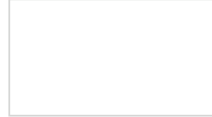
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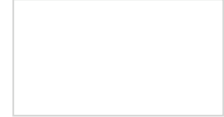
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ROBOTICS

Ranger walking robot sets new world record at 1.34mph

By [Darren Quick](#)
00:26 July 26, 2010

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5 Pictures



Cornell Ranger gets a walking buddy in Fatemeh Hasaneini, a daughter of one of the students who worked on the robot

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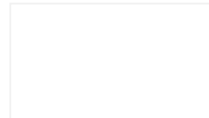
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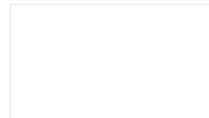
It might not have been setting a cracking pace, but a Cornell University robot named Ranger set an unofficial world record on July 6 when it walked 14.3 miles in about 11 hours on a single charge. The untethered, four-legged robot was steered around the 1/8-mile indoor track in Cornell's Barton Hall by a human operator using a standard toy remote control some 108.5 times. On its record setting journey Ranger made 65,185 steps, beating the former record for an untethered legged robot of 12.8 miles set by Boston Dynamics' [BigDog](#).



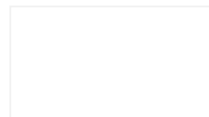
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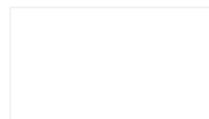
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Standing still, Ranger looks a bit like a tall sawhorse and its gait suggests a human on crutches, alternately swinging forward two outside legs and then two inside ones. There are no knees, but its feet can flip up out of the way, while it swings its legs so that the robot can finish its step. The robot also features two blue foam "eyes" that are purely for fall protection, as are the black foam "ears."

One of the goals of the attempt was to show off the machine's energy efficiency. Unlike other walking robots that use motors to control every movement, its creators say the Ranger appears more relaxed and in a way emulates human walking, using gravity and momentum to help swing its legs forward. It is powered by a 24.9V Lithium-ion battery and weighs a total of 18.6 lbs.



Because the robot walked in lanes two and three, the distance per lap is a bit more than an eighth of a mile; its path was measured at 212.3 meters per lap, giving it a total walk distance of $(212.3 \text{ m})(108.5) = 23,034 \text{ m} = 23.0 \text{ kilometers} = 14.3 \text{ miles}$. Over the course of its journey the robot's average speed was 1.34 mph (2.15km/h) with 13.9-inches average distance per step and an average time per step of 59 seconds. Ranger's long walk started Monday at 2:08 p.m. and ended at 12:48 a.m. Tuesday July 6, 2010 when its batteries went dead, for a total walk time of 10 hours, 40 minutes, 48 seconds.

This is not the first time Ranger has held the record. In April 2008 it strode about 5.6 miles around the Barton Hall to set the record, before Boston Dynamics' quadruped robot claimed the title by traveling 12.8 miles without stopping or refueling.

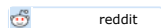
Also, two days before setting out on his record setting walk Ranger had walked 13 miles on one charge. So, not counting running out of juice, Ranger walked more than 27 miles without failure.

Ranger was built by a group of engineering students led by Andy Ruina, Cornell professor of theoretical and applied mechanics, who says the new record not only advances robotics, but helps undergraduate students learn about the mechanics of walking. The information could be applied to rehabilitation, prostheses for humans and improving athletic performance, she says.

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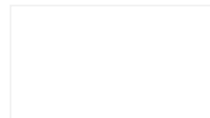
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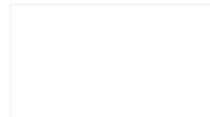
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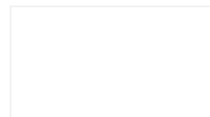
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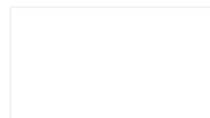
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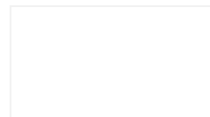
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I thought - by the way the girl was centred in the photo - that the "feature" was a creepy Japanese human like robot, and not the automated walking frame.....

Mr Stiffy - July 26, 2010 @ 10:40 pm PDT

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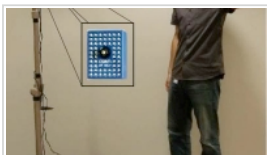
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