

COMING TO HOSPITALS NEAR YOU: SELF-NAVIGATING ROBOTS



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Tue Sep 21, 2010 11:25 AM ET
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You've probably watched enough television shows about hospitals to know that they're busy places, where the right tools need to be in the right place at just the right time in order to help save lives. With hundreds of nurses, doctors and orderlies racing around, mistakes happen.

But although humans are prone to mistake-making, [robots](#) aren't. Plus, they work for almost nothing once you get them running. At least, that's the thinking behind hospitals that are starting to

use [autonomous robots](#) to transport goods throughout the building.

In the era of relentless cost-cutting, hospital executives would much rather have cost-efficient robots roaming around the hospital with secure carts of linens, lab specimens and meals, than expensive staff.

Pittsburgh, PA-based [Aethon](#) has such a robot, the TUG (above), which navigates a hospital using a digital map of the building. Each TUG robot is equipped with a matrix of light whiskers to detect people and obstacles. Those "light whiskers" are made up of sonar, infrared and laser technologies for sensing capabilities in any situation.

But there's only so much I can convey about this robot with words, so this video is worth a view. It's the TUG robot in action at the Veterans Administration hospital in West Roxbury, just outside Boston.

Weighing in at 55 pounds, it's powered by a couple of independent 12-volt DC motors that recharge automatically when it's not in use. When it's fully charged, it's supposed to be in continuous operation for ten hours before needing another charge.

[Robots of all sorts are getting better at communicating with each other](#), and TUG robots are no different. They can "talk" with each other in the hallways to get information about the most efficient way to get to their destinations.

TUG robots have at least one more advantage to humans, albeit slightly hidden: no one is going to create yet another TV show in a hospital about the drama between hospital robots.

Credit: Aethon