

Indoor security robot reads badges, flags open doors and more

2 March 2017, by Nancy Owano



(Tech Xplore)—Can you picture indoor security robots strolling around your workplace tomorrow? You might balk at the idea of militaristic rolling machines making people feel uncomfortable as they hunt for thieves and blunderers. Well Cobalt Robotics has come up with a different kind of indoor security robot.

The robots made news this week when *IEEE Spectrum* posted a video on Wednesday to show what they look like and what they do.

These are mobile robots designed to work alongside human guards. "Cobalt's robots gather data using sensors like cameras and lidar, and process the information using machine-learning algorithms to detect and flag anomalies," said *IEEE Spectrum*.

Whether at a data center, school, warehouse, hospital, museum, or office, the robots have been designed to become a comfortable part of surroundings yet doing the job in security checks.

The [robot](#) has 60-plus sensors to detect and report anomalies. It sets about patrolling the premises,

looking for intruders or anything that's out of the ordinary.

Evan Ackerman in *IEEE Spectrum* said it carried such features as day-night cameras, [lidar](#), microphone array, RFID and badge readers, and smoke and CO2 detectors.

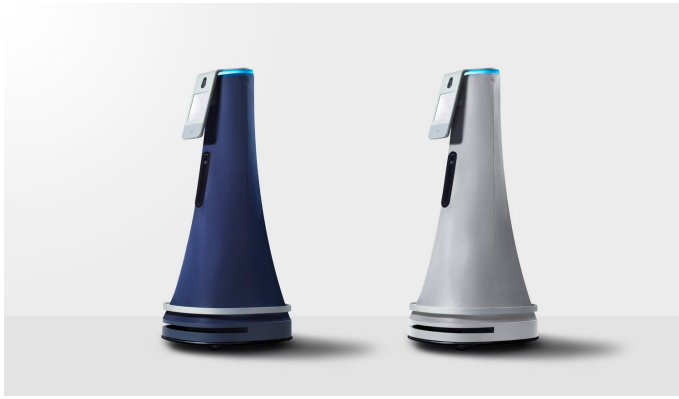
The video shows a robot roll coming up to the main desk as two people pass by. It detected the two and it detected the woman behind the desk. It detected audio and appeared ready to assist with directions/concierge-type interactions with someone.

At this point it is obvious that the robot does not look threatening or hostile in any way.

The company said they worked with industrial [designer](#) Yves Béhar to build a fabric-covered robot. "This conveys a soft and friendly feeling."

Rachel Metz in *MIT Technology Review*: "Cobalt's bots are like sleek, human-size board-game [pieces](#) with fabric stretched over swooping metal ribs. A touch screen on one side lets office workers communicate with a remote operator when needed."

As soft and friendly as it looks, the robot is engineered to detect anything unusual and to tell someone.



additional information." Also, robots can provide consistent operation and maintain focus. "Our robot has eyes on the back of its head, can see in pitch black, and never needs to sleep. And when it finds something, it can 'skype' in a highly-trained pilot to make hard decisions."

The company is a Palo Alto startup. What's next? Ackerman said Cobalt will be starting pilots very soon

Metz said, "The first of the startup's robots will be deployed later this month to some paying customers, Deyle says, including a couple of large finance companies and some publicly traded technology companies."

More information: www.cobaltrobotics.com/

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We see in the video that there is such a whoops moment when an anomaly is detected—a door was left open.

A person at a monitor reads the message, "Door has been left open. Close as soon as possible."

(Ackerman made a point about how while autonomy is important, having the option for a human in the loop can solve a lot of problems, so it's easy for a remote operator to hop into the robot and control it via telepresence when necessary.)

Also, the video showed how at the end of a work day, it showed a screen for a worker, "Please scan your identification badge."

All in all, the robot can recognize such situations as unauthorized people, open doors and windows and hazards such as suspicious items and water leaks.

Question may be asked, though, if a company needs to buy such a robot when they already employ security guards and have cameras? Wait a minute...why do I need to bother buying a robot if I already have ample security guard staff, overdoing it? Travis Deyle, Cobalt Robotics co-founder, said in the *IEEE Spectrum* report that the robots have a special advantage to support the human guard.

Deyle said, "robots can reposition themselves to get an infinite number of vantage points, including opportunistically relocating themselves to obtain

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