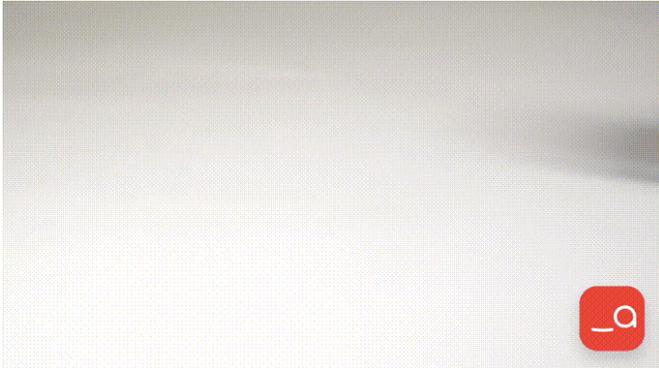


Playing with little robots that act smart around obstacle courses

26 January 2017, by Nancy Owano



(Tech Xplore)—A lot has been said about home robots giving assistance and companionship to children, the homebound and the elderly. Machines designed with expressive eyes and head gestures are of special interest and admiration. But what if we went back to creature type robots and giving them artificial intelligence such that they can be the robots we want to spend time with too?

That question is the foundation of the bots_alive story and technology.

Brad Knox said for nine years he researched how people could interact with machine learning, artificial intelligence and robotics. After he got his PhD at University of Texas at Austin he went to the MIT Media Lab as researcher.

He said there they wanted to see how robots could interact with people and they would huddle and ask why there were no robots they would really want to interact with for more than a few minutes!

The conversations led him to start bots_alive. He said the focus is on robots that you feel are alive even though you know they are just machines. The

little robots are critter-like and bots_alive is now a [Kickstarter project](#). They are offering a [robot kit](#) where your smartphone plays a key role as the eyes and brains of this spider.

Michael Irving in *New Atlas* reported that "A new kit called bots_alive, which adds AI and augmented reality elements to an existing Hexbug Spider, is now [crawling](#) out of the toy box and onto Kickstarter."

Explaining the Hexbug, *New Atlas* said, "These relatively cheap robo-bugs are normally remote-controlled, but the bots_alive kit is designed to give them a life of their own."

Evan Ackerman in *IEEE Spectrum* wrote about their use of computer vision. Ackerman said the little items are using "computer vision to localize a fiducial sticker placed on the robot's head. As long as your phone's camera can see the fiducial, it has full control of the robot's movements, and gives it a [life](#) of its own."

As the Kickstarter site page said, craft obstacle courses and watch these robots solve them with lifelike intelligence. This is a kit that turns mindless remote-controlled Hexbug Spiders into smart and autonomous [creatures](#).

Knox said his team created robot behaviors that are varied and unpredictable. And that points to the significance of these little things. *IEEE Spectrum* noted what we have here are sophisticated brains being brought to cheap robots.

Tyler Lee in *Ubergizmo*: "It's one thing to be able to manually remote control drones or robots, but it's another thing to have them control themselves." Lee added, "the [possibilities](#) of [autonomous robots](#) that can figure their way out of problems does hold a lot of promises."

Lee described the process, saying "robots can find

their way around various beacons. For example you could craft a maze and get the robot to seek out a blue beacon, and placing red beacons in its path means that its AI will then try to figure out a way around it."

Lee wrote about the unpredictability in action, where "the robots are unpredictable as they will be able to generate a variety of possible paths to take before deciding, going to show that it is 'thinking' about its next move."

Kyle Wiggers in *Digital Trends* also reported on this feature. "AI programmers typically give robots personalities with decision trees, Knox explained, dictating the rules by which they abide when [behaving](#) in certain ways. But true [artificial intelligence](#) of the kind embodied by bots_alive is entirely free form. 'We don't always know what the [robot](#) will do,' he said."

Those who want to have this item can pledge on the Kickstarter page where prices vary according to what you choose, so it is best to check there. But as an example, a pledge of \$60 will get you the complete bot_alive kit. Estimated delivery is September.

More information: botsalive.com/

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