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Why A Fleet Of 3-D Printing 'Spiders' Might Be Good For Business

By Hilary Brueck, Former Contributor.

Published Apr 09, 2017, 07:05pm EDT, Updated Apr 10, 2017, 07:28pm EDT

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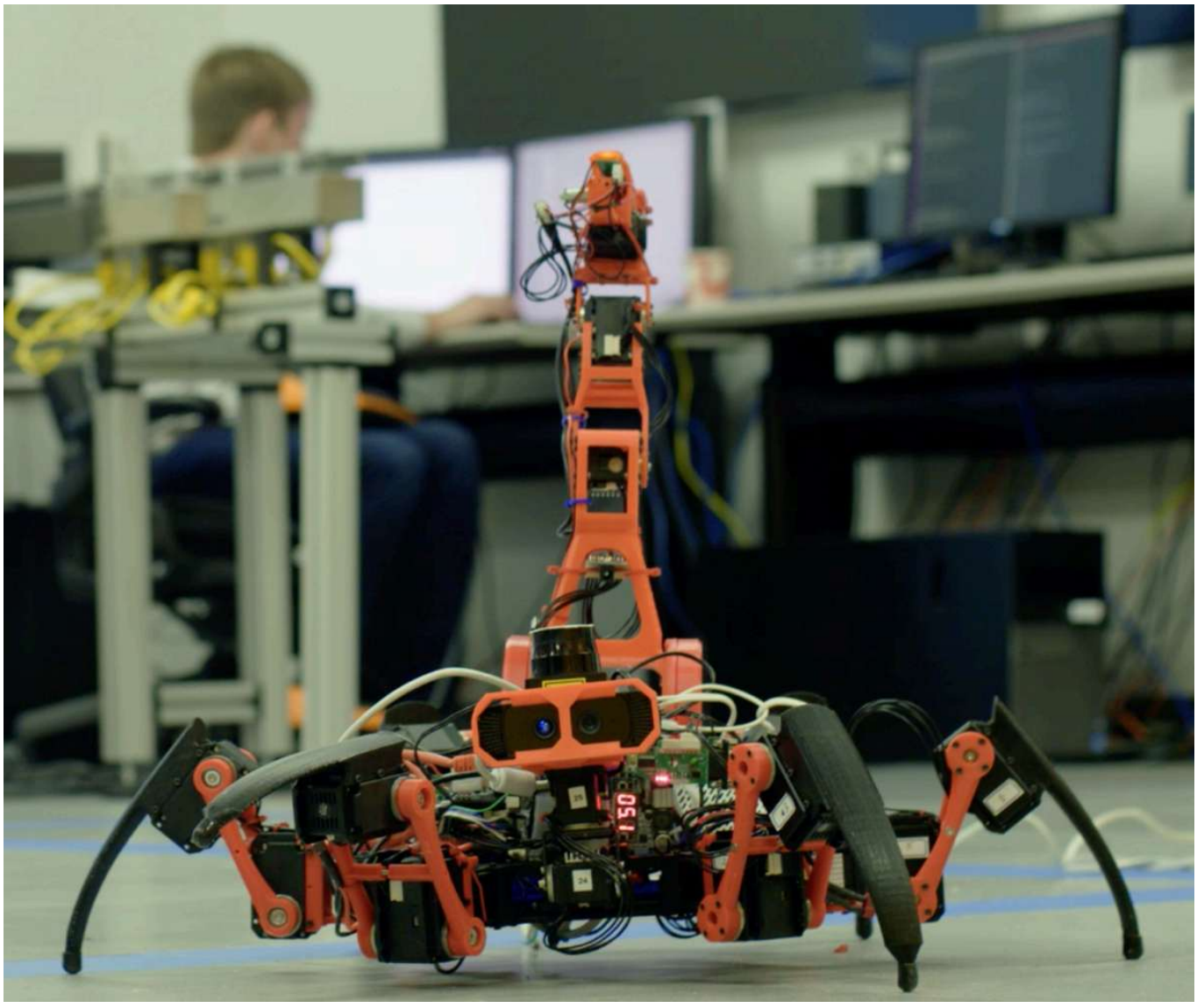


Researchers at Siemens hope this 3-D printing bot will help them do more than just spit out spare parts.

CREDIT: SIEMENS

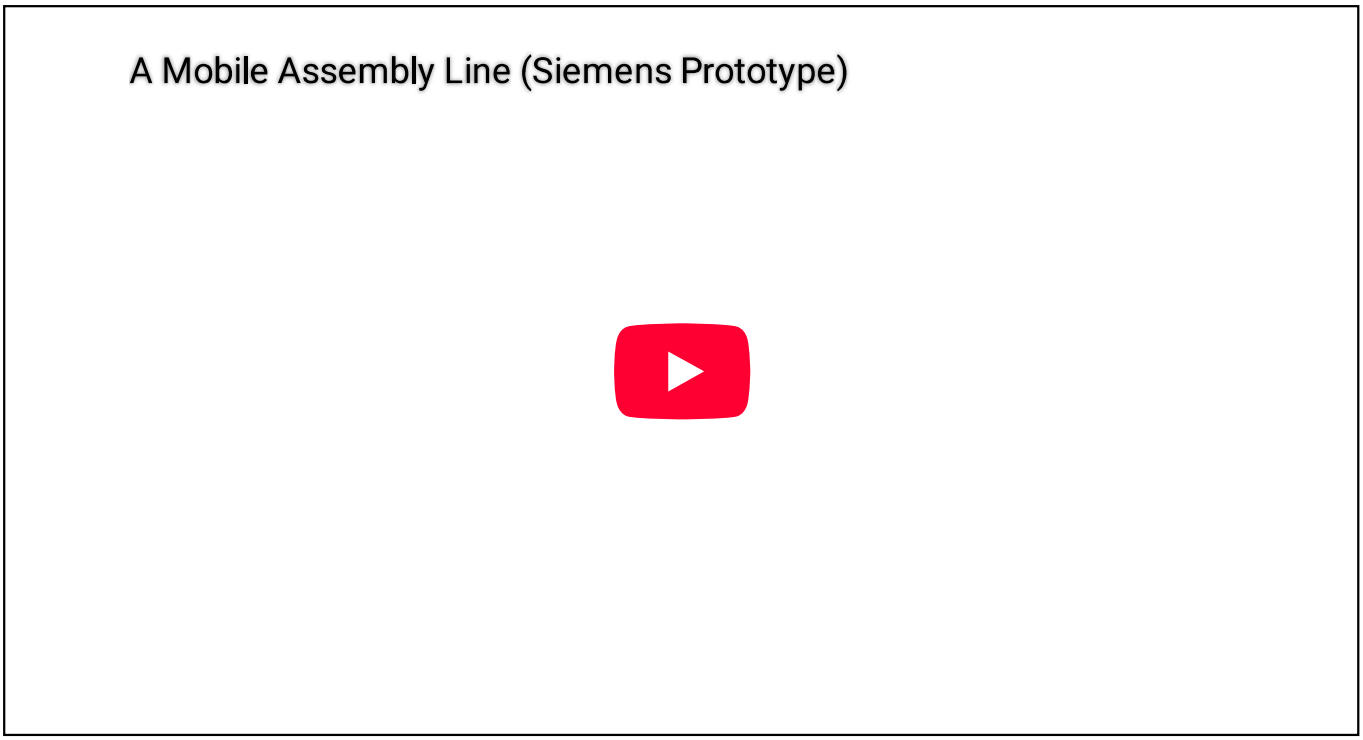
It can say hello. It can crawl its way across a stage. And some day, it might print a working spare part, too.

Researchers at Siemens developed their first walking, talking 3-D printer last year. Now, the infant technology behind the ankle-high “spider bot” is crawling closer to going big time, becoming the foundation for a whole new kind of factory work.

Mechanical engineer Hasan Sinan Bank, who helped develop the one-year-old crawling printer, says the goal was never to create a perfect, 6-limbed printer that can crawl its way into tricky-to-reach spots. Instead, the robot is more like a leggy guinea pig, testing out new robotics software that Siemens hopes it will some day deploy in much larger factory settings.

“They are going to print something together,” Bank explains. “Or, one is going to print, the other is going to drill.”

A prototype setup of that robotic teamwork was on display recently at Siemens U.S. Corporate Technology Headquarters in Princeton, New Jersey – where much heftier industrial bots were working together to manufacture plastic toy cars. The team of three Kuka robotic arms were all tracking toy production as a team, moving in where a helping "hand" was needed, as well as noticing and picking up misplaced cars:



At this stage in development, these more nimble assembly lines still require a lot of human oversight. But some day, the same software that is helping the robotic spiders crawl the floor while avoiding obstacles and keeping their printing parts in balance could enable whole new systems of factory work – on tasks much more complex than assembling handheld toys.

For example, a team of robots could work together on a new kind of fuselage cylinder for airplanes, Bank says. If each robot could attack the job from a different angle, they might build complex shapes together that no single printer could create by itself.

“It's not going to be tomorrow,” Bank tells me. “But this is one of the goals.”

Hasan Sinan Bank helped develop the first walking, talking 3-D printer from Siemens - he uses it to test out new kinds of robotics software.
CREDIT: HILARY BRUECK

It may not be able to '*spin a web any size*' but it turns out even the robotic spider species (with just six legs) is perfecting its superpowers.

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