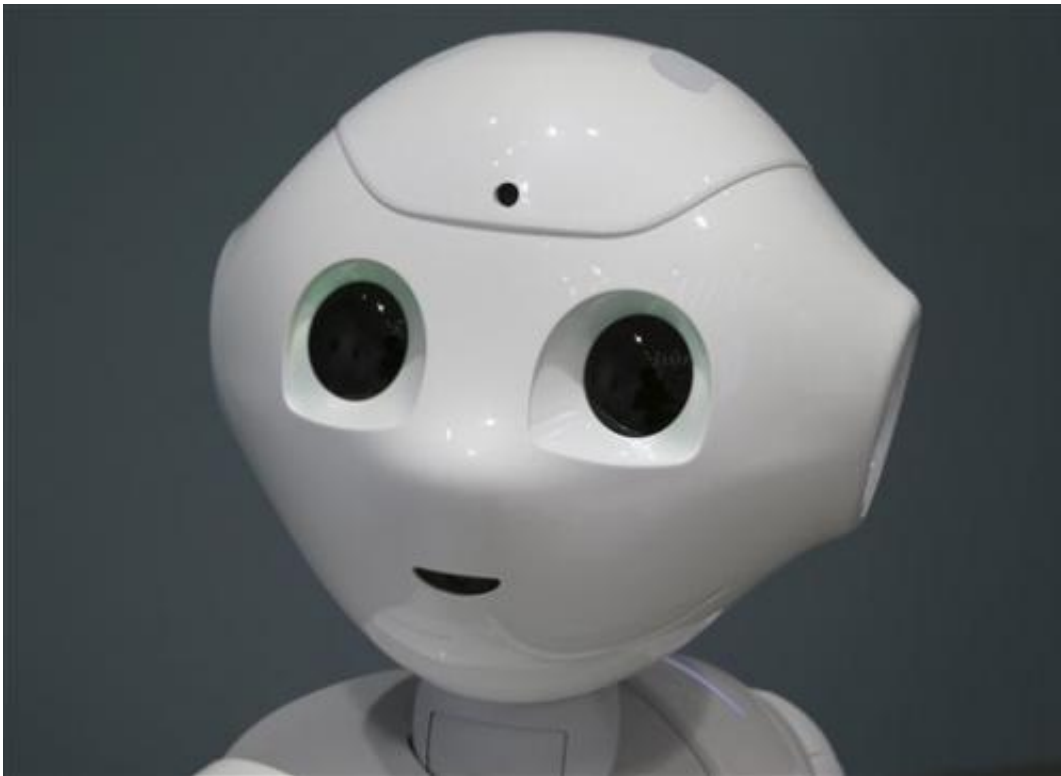


## Emotional robot set for sale in Japan next year (Update 3) (w/ Video)

June 5 2014, by Yuri Kageyama

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Humanoid Robot "Pepper" is displayed at SoftBank Mobile shop in Tokyo, Friday, June 6, 2014. The 121 centimeter (48 inch) tall, 28 kilogram (62 pound) white Pepper, which has no hair but two large doll-like eyes and a flat-panel display stuck on its chest, was developed jointly with Aldebaran Robotics, which produces autonomous humanoid robots. (AP Photo/Koji Sasahara)

A cooing, gesturing humanoid on wheels that can decipher emotions has been unveiled in Japan by billionaire Masayoshi Son who says robots

should be tender and make people smile.

Son's mobile phone company Softbank said Thursday that the robot it has dubbed Pepper will go on sale in Japan in February for 198,000 yen (\$1,900). Overseas sales plans are under consideration but undecided.

The machine, which has no legs, but has gently gesticulating hands appeared on a stage in a Tokyo suburb, cooing and humming. It dramatically touched hands with Son in a Genesis or "E.T." moment.

Son, who told the crowd that his longtime dream was to go into the personal robot business, said Pepper has been programmed to read the emotions of people around it by recognizing expressions and voice tones.

"Our aim is to develop affectionate robots that can make people smile," he said.

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Besides featuring the latest voice recognition, Pepper is loaded with more than a dozen sensors, including two touch sensors in its hands, three touch sensors on its head, and six laser sensors and three bumper sensors in its base.

It also has two cameras and four microphones on its head and has Wi-Fi and Ethernet networking capabilities.

But a demonstration Friday at a Softbank retailer in Tokyo highlighted the robot's shortcomings as much as its charm.

Voice recognition takes a while to kick in, when its eyes light up in a listening mode after the robot stops talking, making for less than spontaneous dialogue, similar to the frustration one experiences talking with iPhone's Siri.

Pepper was obviously more at ease going into its own chatter, such as asking "Do you do Twitter?" or "Is this the first time you ever spoke to a robot?" But it wouldn't really wait for an answer, rattling on to the next topic.



Kaname Hayashi, a project leader of Humanoid Robots "Pepper," talks with the robot at SoftBank Mobile shop in Tokyo, Friday, June 6, 2014. The cooing, gesturing humanoid on wheels that can decipher emotions has been unveiled in Japan by billionaire Masayoshi Son who says robots should be tender and make people smile. (AP Photo/Koji Sasahara)

Sometimes the robot—which, up close, bears a resemblance to C-3PO in "Star Wars," especially in its clueless look—failed to catch a speaker's words and would say: "I could not hear you. Could you say that again?"

When a person shouted in a big voice to test out how well it read emotions, it didn't do much except to say: "You look like an honest person."

In Thursday's demonstration, Pepper sang, "I want to be loved," and it did more singing and gesturing with its hands Friday.



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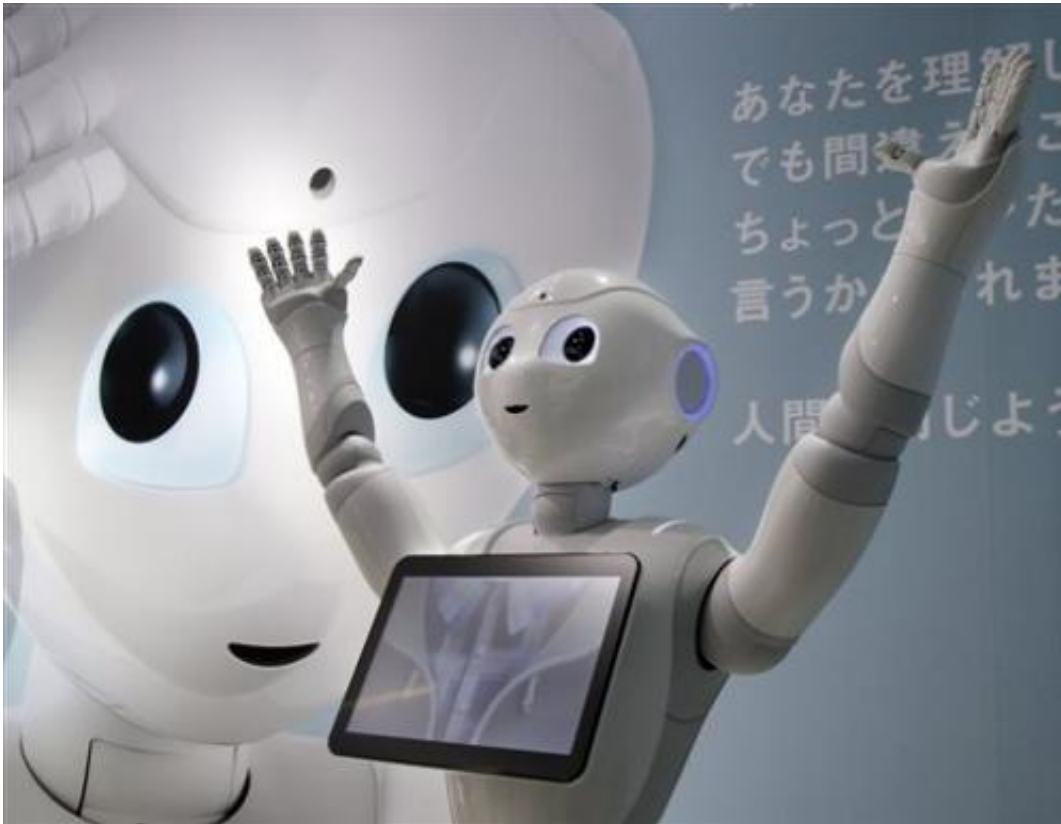
But all its song-and-dance acts seemed to prove was that the machine needs to learn a lot more tricks to impress robot-savvy Japanese. The Softbank shop barely drew a crowd besides a pack of reporters with their cameras.

Cuddly robots are not new in Japan, a nation dominated by "kawaii," or cute culture, but no companion robot has emerged as a major market success yet.

Japanese electronics and entertainment company Sony Corp. discontinued the Aibo pet-dog robot in 2006, despite an outcry from its fans. At that time, Sony had developed a child-shaped entertainment robot similar to Pepper but much smaller, capable of dances and other charming moves, which never became a commercial product.

Honda Motor Co. has developed the walking, talking Asimo robot, but that is too sophisticated and expensive for home use, and appears in Honda showrooms and gala events only. Even then, it is prone to glitches because of its complexity.

Many other Japanese companies, including Hitachi Ltd. and Toyota Motor Corp., not to mention universities and startups, have developed various robots, big and small, which entertain and serve as companions.



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There is little emphasis on delivering on practical work, in contrast to industrial robots at factories and military robots for war.

But the potential is great for intelligent machines as the number of elderly requiring care is expected to soar in rapidly-aging Japan in coming years. Robotic technology is already used to check on the elderly and monitor their health and safety, but robots might also play a role in reducing feelings of loneliness and isolation.

Softbank, which now owns Sprint of the U.S. and boasts more than 100 million subscribers globally, has been growing rapidly as a mobile carrier in Japan, boosted by being the first to offer Apple's iPhone.



Kaname Hayashi, project leader of Humanoid Robot "Pepper" poses for photos with "Pepper" at SoftBank Mobile shop in Tokyo, Friday, June 6, 2014. The 121 centimeter (48 inch) tall, 28 kilogram (62 pound) white Pepper, which has no hair but two large doll-like eyes and a flat-panel display stuck on its chest, was developed jointly with Aldebaran Robotics, which produces autonomous humanoid robots. (AP Photo/Koji Sasahara)

Aldebaran Robotics, which has offices in France, China, Japan and the U.S., is 78.5 percent owned by Softbank.

"I've believed that the most important role of robots will be as kind and



emotional companions to enhance our daily lives, to bring happiness, constantly surprise us and make people grow," said Bruno Maisonnier, founder and chief executive of Aldebaran, who appeared on the stage with Son.



Members of press surround humanoid Robot "Pepper" on display at SoftBank Mobile shop in Tokyo, Friday, June 6, 2014. The 121 centimeter (48 inch) tall, 28 kilogram (62 pound) white Pepper, which has no hair but two large doll-like eyes and a flat-panel display stuck on its chest, was developed jointly with Aldebaran Robotics, which produces autonomous humanoid robots. (AP Photo/Koji Sasahara)

Aldebaran has produced more than 5,000 of its Nao humanoid, its first product, which is used for research and educational purposes.

Pepper can get information from cloud-based databases and comes with



safety features to avoid crashes and falls, and its capabilities can grow by installing more robot applications, according to Softbank.

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