

# Woman or machine? New robots look creepily human

24 June 2014, by Yuri Kageyama



Japanese android expert Hiroshi Ishiguro, second left, and National Museum of Emerging Science and Innovation Miraikan Chief Executive Director Mamoru Mohri, second right, pose with a female-announcer robot called Otonaroid, right, and a girl robot called Kodomoroid during a press unveiling of the museum's new guides in Tokyo Tuesday, June 24, 2014. The latest creations from Osaka University Prof. Ishiguro are the Otonaroid, the Kodomoroid and Telenoid, a hairless mannequin head with pointed arms that serves as a cuddly companion. The robots with silicon skin and artificial muscles were shown to reporters at Miraikan museum on Tuesday. (AP Photo/Shizuo Kambayashi)

The new robot guides at a Tokyo museum look so eerily human and speak so smoothly they almost outdo people—almost.

Japanese robotics expert Hiroshi Ishiguro, an Osaka University professor, says they will be useful for research on how people interact with robots and on what differentiates the person from the machine.

"Making androids is about exploring what it means to be human," he told reporters Tuesday, "examining the question of what is emotion, what is awareness, what is thinking."

In a demonstration, the remote-controlled machines moved their pink lips in time to a voice-over, twitched their eyebrows, blinked and swayed their heads from side to side. They stay seated but can move their hands.

In a clear triumph, Kodomoroid read the news without stumbling once and recited complex tongue-twisters glibly.

The robot, designed with a girlish appearance, can use a variety of voices, such as a deep male voice one minute and a squeaky girly voice the next. The speech can be input by text, giving them perfect articulation, according to Ishiguro.

There were some glitches—such as the lips not moving at all while the robot spoke, or the Otonaroid announcer robot staying silent twice when asked to introduce itself.



National Museum of Emerging Science and Innovation Miraikan Chief Executive Director Mamoru Mohri hands a female-announcer robot called Otonaroid a letter of appointment to assign as a guide at the museum as a girl robot called Kodomoroid, second left, looks on during a press event in Tokyo Tuesday, June 24, 2014. The latest creations from Japanese android expert Hiroshi Ishiguro are Otonaroid, Kodomoroid and Telenoid, a hairless

mannequin head with pointed arms that serves as a cuddly companion. (AP Photo/Shizuo Kambayashi)

But glitches are common with robots because they are delicate gadgetry sensitive to their environment.

Kodomoroid and the woman robot Otonaroid were joined at the demonstration by the minimally designed Telenoid, a mannequin head with pointed arms that serves as a cuddly companion.

The two life-size robots, which have silicon skin and artificial muscles, will be on display starting Wednesday, at Miraikan museum, or the National Museum of Emerging Science and Innovation, in Tokyo, allowing the public to interact with them extensively.



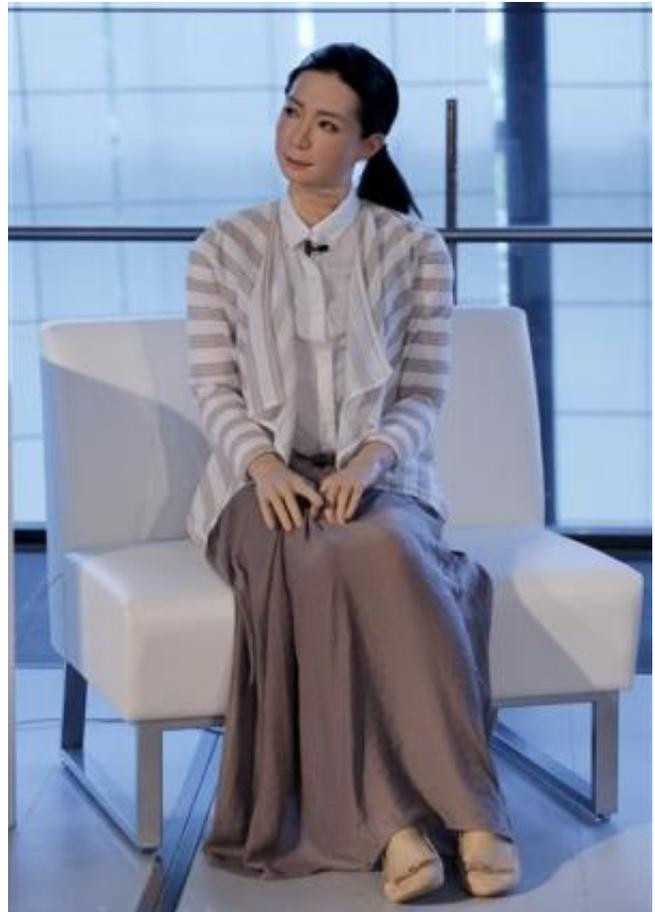
Android robot Kodomoroid speaks during a press event at the National Museum of Emerging Science and Innovation Miraikan in Tokyo Tuesday, June 24, 2014. The latest creations from Japanese android expert Hiroshi Ishiguro are a female-announcer robot called Otonaroid, a girl robot called Kodomoroid and Telenoid, a hairless mannequin head with pointed arms that serves as a cuddly companion. Kodomoroid read the news without stumbling once and regurgitated complex tongue-twisters glibly. (AP Photo/Shizuo Kambayashi)

Reflecting widespread opinion, Ishiguro said Japan leads the world in playful companion robots. But he

acknowledged the nation was behind the U.S. in military robots.

Developing robots for more than 20 years, Ishiguro has made a point of creating robots that approximate the human appearance, including creatures that look like him. He has sent them to give overseas lectures.

His approach differs from some robotics scientists who say human appearance is pointless, perhaps creepy, and robots can look like machines, such as taking the form of a TV screen or a portable device.



A female-announcer robot called Otonaroid speaks during a press event at the National Museum of Emerging Science and Innovation Miraikan in Tokyo Tuesday, June 24, 2014. The latest creations from Japanese android expert Hiroshi Ishiguro are the Otonaroid, a girl robot called Kodomoroid and Telenoid, a hairless mannequin head with pointed arms that serves as a cuddly companion. (AP Photo/Shizuo Kambayashi)

Ishiguro noted proudly how Japanese Internet company Softbank Corp. recently showed a robot named Pepper, which looks a little like C-3PO in "Star Wars," and will sell for less than 200,000 yen (\$2,000).

Pepper's arrival means robots are increasingly becoming part of everyday life in Japan.

"Robots are now becoming affordable—no different from owning a laptop," said Ishiguro.



Photographers gather around to take photos of a female-announcer robot called Otonaroid, second right, and a girl robot called Kodomoroid, right, during a press unveiling of new guides at the National Museum of Emerging Science and Innovation Miraikan in Tokyo Tuesday, June 24, 2014. The latest creations from Japanese android expert Hiroshi Ishiguro are the Otonaroid, the Kodomoroid and Telenoid, a hairless mannequin head with pointed arms that serves as a cuddly companion. (AP Photo/Shizuo Kambayashi)

National Museum of Emerging Science and Innovation Miraikan Chief Executive Director Mamoru Mohri, right, gives a speech next to a female-announcer robot called Otonaroid, second left, and a girl robot called Kodomoroid during a press unveiling of the museum's new guides in Tokyo Tuesday, June 24, 2014. The latest creations from Japanese android expert Hiroshi Ishiguro are Otonaroid, Kodomoroid and Telenoid, a hairless mannequin head with pointed arms that serves as a cuddly companion. (AP Photo/Shizuo Kambayashi)

**More information:** Hiroshi Ishiguro Laboratories [www.geminoid.jp/en/index.html](http://www.geminoid.jp/en/index.html)

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