Robot cheerleading squad showcases sensor technology

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Japan's Murata Manufacturing unveils 10 small cheerleading robots, in Tokyo on September 25, 2014

A team of cheerleading robots made their dancing debut in Tokyo on Thursday as creator Murata Manufacturing demonstrated its cutting-edge sensor technology.

With curtains pulled back and Japanese pop music pulsing in the

background, 10 doll-like robot girls with illuminated pom-poms rolled out onto a stage to perform their choreographed routine.

The cheerleaders stand just 36 centimetres (10 inches) tall with matching bob hairstyles that hide the complicated machinery inside their heads.

The team's advanced gyro sensors, which are usually found in cars and digital cameras, keep them from falling off the balls that they wobble on during their routine, Murata said.

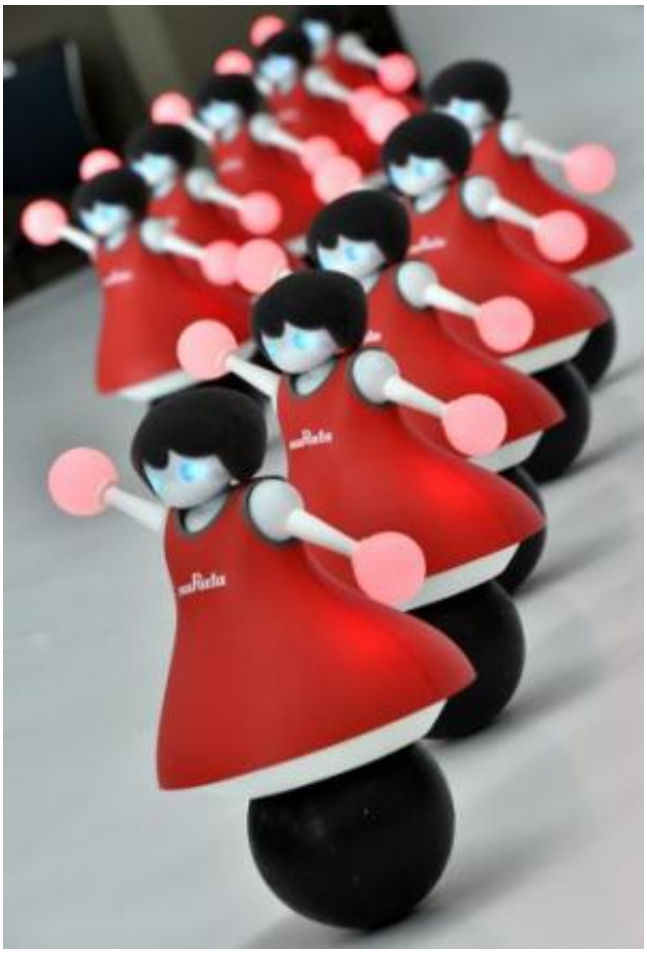
The cute creations have LED eyes that shine in different colours as they manoeuvre into various formations including a heart shape, diagonal lines and a moving figure of eight.

"Of course they cannot jump like true cheerleaders," said Koichi Yoshikawa, a Murata engineer involved developing the technology.

"But the idea is that they are doing their best to stay stable on their little ball, as if they were telling the team, 'hang on, do your best'!"

Group-control technology, developed in collaboration with Kyoto University, makes sure that the robots move in a synchronised way and don't crash into each other.

That promise got off to a shaky start, however, as several dolls collided and fell over during the first take in front of assembled media—prompting assistants to remove clumsy members of the squad.



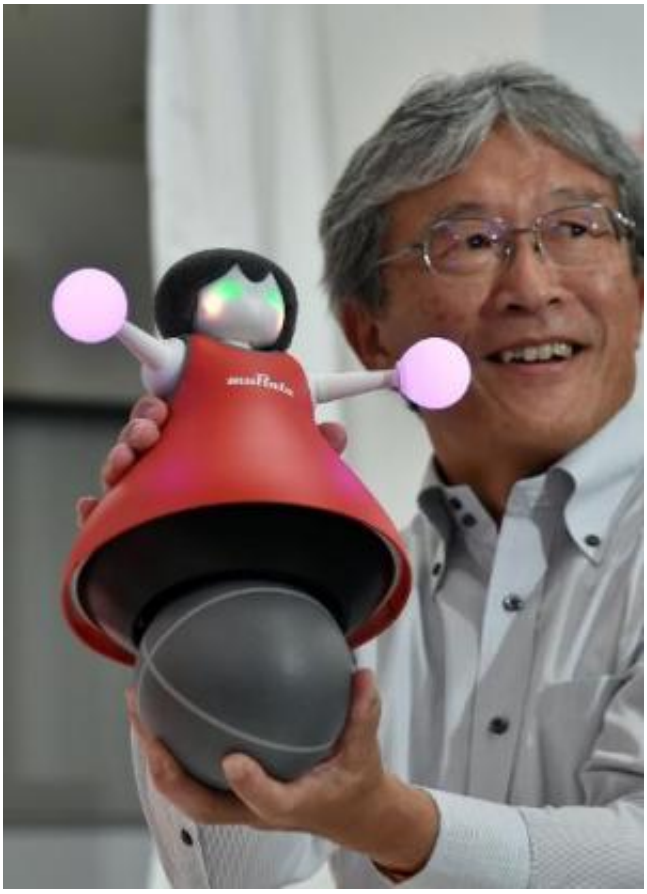
The cheerleaders' bob hairstyles hide the complicated machinery inside their heads

Despite the hiccup, Murata, a major electronics manufacturer, said the technology has big potential, such as helping cars stabilise on slippery or damaged roads.

The company currently makes sensors that are used to monitor tyre pressure and in engine control units.

Its next-generation technology could also be used as an anti-collision device in self-driving cars being developed by companies such as Google

and Tesla.



Advanced gyro sensors keep the cheerleaders from falling off the balls that they wobble on

Also it "could be used in rescue robots that perform group tasks at disaster sites," said Yoshikawa.

While Murata is not planning to mass produce the cheerleaders, it's hoping they'll help draw kids into the engineering field, he said.

The pom-pom squad follows on from the firm's 'Murata Boy', a small

child-like robot who rides a bicycle, first launched in 1991 and then updated in 2005, as well as unicycle-riding 'Murata Girl', released in 2008.