

## Robots are lords of the dance at South Korean festival

November 1 2010, by Nam You-Sun



This picture taken on October 2010, shows a South Korean guide robot making a facial expression at an exhibition centre in Goyang, a satellite city northwest of Seoul. "That's cool!" shouted a packed crowd as five dancing robots flashing red and blue lights started rocking and grooving to popular Korean songs.

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The "Humanoid Dancing Crew" -- standing around 30-40 cm (12-16



inches) tall -- won a standing ovation for their performance at what is billed as the world's largest robot festival.

Next door, humanoids played football. Losing robots clutched their heads in anger, while winners jumped for joy and punched the air. Their human backers did likewise.

Since its launch in 2006, Robot World has drawn around 120,000 visitors and 6,000 participants every year for a demonstration of cutting-edge developments in robotics, which <u>South Korea</u> sees as a future growth industry.

This year at least 120 companies and 8,000 contestants took part in the October 28-31 event at Ilsan north of Seoul.

"The number of visitors is increasing every year. It is a good opportunity for us to advertise our products," said Lee Hak-Soo, an engineer at Hanool Robotics that developed Tiro, a robot that has acted as a tour guide at the presidential palace.

Students from technical high schools took field trips to the show.

"For sure, the robots have improved technically compared to last year. They are now much more like human beings," said Hyun Yun-Duk, a teacher from Incheon mechanical technical high school.

"My students said the technology is marvellous and these robots are dazzling."

The festival also featured taekwondo bouts, with robots either sizing up opponents on their own or controlled by owners.

There were dancing competitions, obstacle races and various tasks



designed to test sensory and movement skills.

The taekwondo robot bouts, blending South Korea's ancient martial art with space-age technology, lured the most spectators.

Black and yellow robots from 10 teams which qualified for the event used a head camera to detect opponents and landed mercilessly hard but bruise-free blows.



This picture taken on October 2010, shows a South Korean man playing with a pet robot at an exhibition centre in Goyang, a satellite city northwest of Seoul. "That's cool!" shouted a packed crowd as five dancing robots flashing red and blue lights started rocking and grooving to popular Korean songs.

Three referees scored each nine-minute bloodless bout, awarding points for technique, before announcing the winner.

"More people are coming to see the games compared to last year," said Roh Sung-Su, a referee and a researcher at the prestigious Korea Advanced Institute of Science and Technology.

"The quality of the competition has definitely improved."



"Yes!" shouted the humans on the teams after every successful attack. Struggling humanoids won encouraging cheers.

"We've prepared for four months and will come back next year with better robots," said Kang Hyun-Jung, 24, leader of the Dong-A university team from Busan.

Their <u>robot</u> Optimus Prime made the last eight on Friday.

"We tried hard to add in as many taekwondo techniques as possible," said Kang.

In other contests, researchers from the United States, India, Spain and Japan -- using Korean motors for their robots -- staged an eye-catching dance parade and a robotic fighting competition.

"We are definitely enjoying this. It's amazing and the level of robots is so high. It's hard to see such high-technology robots in Spain," said Sergi Hernandez, a technician from Humanoid Lab IRI.



This picture taken on October 2010, shows South Korean spectators watching a robot performing at an exhibition centre in Goyang, a satellite city northwest of Seoul. "That's cool!" shouted a packed crowd as five dancing robots flashing red and blue lights started rocking and grooving to popular Korean songs.



The lab's robots Isabel and Paco sported traditional Spanish costumes and danced the macarena in front of an appreciative crowd.

For the fights, Matt Trossen and Andrew Alter from Interbotix Lab in the United States displayed a veteran bruiser named Geiger, weighing 6.2 kg (13.6 pounds) and standing 60 centimetres high.

Apart from the professionals, elementary schoolchildren also took part, using self-designed robots in a team sponge-carrying contest. Each team had two robots, one to deliver the sponge and one to collect it.

"I took part because I like robots. I have been doing this since last year and I want to do it again," said Lim Chae-Hyun, 10, from the southeastern city of Gyeongju.

"It's difficult but definitely fun."

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