

# Go 'on location' from your home - with NTU robotics

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IMAGINE being able to explore a place on the other side of the world and chat with people there - all from the comfort of your own home.

A new robotic platform developed by researchers at Nanyang Technological University (NTU) allows people to do just this.

The Mobile Avatar Virtual Engagement NTU (Maven), launched yesterday, combines off-the-rack consumer electronics like webcams, a desktop PC and an LCD screen with moveable "arms" and wheels. The result: an experience more akin to being "on location" than an ordinary webcam or Skype session.

What makes the Maven different from conventional teleconferencing facilities, besides its robotic parts, is its ability to create a 3-D representation of its surroundings, as well as detect and follow voice commands issued by those around it. This eliminates the problem of obstacles getting in the way, a common stumbling block for many androids.

Also unveiled at NTU yesterday was the Immersive Room, which features a nearly 360-degree screen. Anyone who steps into the room and dons a pair of 3-D glasses can use hand movements to direct computer-generated people, not unlike a traffic policeman at a busy intersection.

NTU has partnered with security firm Cisco and SingTel to try to take the Maven to market, and is exploring the use of the Immersive Room to train emergency responders for disaster situations. Both technologies are expected to change how people interact across borders and in virtual spaces.

As part of a collaboration with Underwater World Singapore, the Immersive Room also has a 3-D simulator designed to let autistic children improve their social interaction skills by playing with virtual dolphins.

And there was something for fashionistas too. New simulation software that uses 3-D modelling to show how garments will fit was presented. The model can be customised to the exact body proportions, skin tone and hairstyle of each user.

"Science can be sexy," said Professor Nadia Thalmann, director of the Institute for Media Innovation at NTU and the brains behind the fashion technology. "Fashion and IT together open tremendous goals of new research for us."

Summing up the different projects, NTU president Bertil Andersson stressed the importance of pushing technological boundaries.

"Virtual reality is one of the most important technologies of the future," he said. "It will produce a great leap forward in many fields, like communications, entertainment, engineering and even health care."

The three projects are among those being showcased at NTU's Research Techno Plaza Foyer.

It is open to members of the public today and tomorrow, from 5pm to 7pm.