





n 2004, an autonomous Hummer was challenged to travel in a straight line across an empty desert where there were no obstacles in its path.

It did not succeed.

Then in 2015, there was the Google self-driving car which, according to Wikipedia, traversed San Francisco's Lombard Street, famed for its steep hairpin turns, went through city traffic, drove over the Golden Gate Bridge and around Lake Tahoe.

Never in the history of man has technology moved at such as pace, said Mr Peter Ho, Founder and Chief Executive Officer of engineering solutions company Hope Technik, in a presentation on Robotics of the Future at InnovFest unBound.

So what's next?

"We have to be worried," he said, possibly tongue-in-

The recent DARPA Robotics Challenge, a competition funded by the United States Defense Advanced Research Projects Agency, required teams to develop a robot that could drive a utility vehicle at the site; dismount and make its way across rubble; remove debris blocking an entryway; open a door; enter a building; climb an industrial ladder and traverse an industrial walkway; use a tool to break through a concrete panel; locate and close a valve near a leaking pipe; and connect a fire hose to a standpipe and turn on a valve.

"Fortunately none succeeded," said Mr Ho.

"But the previous time in 2004, the Hummer was tasked to drive autonomously across the desert and no one succeeded, and look where we are now."

"If you take the ability of AI and mix it into the hardware, what we are going to see is something phenomenally frightening," he said.

Unlike automation which is about doing the same job in the same environment repeatedly, robotics is about doing tasks in a different environment on its

"There is freedom," said Mr Ho, "and that is a paradigm shift that we need to get familiar with." Talking 'bout Bots

Are we having a "bot bubble"?

Mr Rob LoCascio mulled over the description as he spoke about the high demand for bots driven by companies trying to navigate the digital layer between their brand and the customer.

Sharing his views in a fireside chat at InnovFest unBound, Mr LoCascio, Founder and Chief Executive Officer of LivePerson, said this was still a "trial period" for brands to use the technology effectively.

His company develops products for online messaging, marketing and analytics.

"Bots are good at tactical situations. But when it comes to customer care, brands want to create a human connection to build up the life-time value of the customer. Humans buy from humans. That is where we change the game with the consumer such they do bring in a live person."

He cited the example of 1-800-Flowers.com, a US gift never again have to be put on hold." retailer that was amongst the first to use 24 x 7 toll-

free telephone number and the Internet for direct sales to customers. Once a customer connects to its service via social media or the web site, a bot or messenger starts to ask questions. The system monitors and analyses customer sentiment and if a problem is detected, a live person steps in to help.

The challenge with bot technology, said Mr LoCascio, is that most bots are scripted.

A lot of times, however, customers do not ask questions the same way, and that is why artificial intelligence and machine learning are being challenged to get it right.

What is happening now is that brands are evaluating the reality behind the bots.

"I don't' think the world will become bot-centric," said Mr LoCascio.

"I believe humans still need a human connection to be empathetic and that ultimately human interaction drive loyalty. But bots can do things that we do not want to do."

He noted that today, brands spend some US\$1.2 trillion to field 264 billion customer calls a year, using "an old technology called voice". There is an opportunity to move that \$1.2 trillion to messaging, to mobile, to digital.

"Every brand is trying to find the Uber within themselves. Customer care is your Uber," he said.

"You can take something that is old and broken, and not have to pick up the phone to make a call, and they



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