

50 successful developers:
nominations extended to Aug 17
pages 16 & 17

Ghostbusters back as a fun game
page 21

RISING STARS



Next-gen technopreneurs place Singapore on world stage
pages 10 - 12

Dr Li Haizhou, 45, Bag-of-sounds

Claim to fame: He put Singapore on the world map with his "voice biometrics" technology that is able to match a voice sample against a database of voices, like the way fingerprints are identified

HIS TECHNOLOGY to match voices is so unerring, Dr Li Haizhou, 45, put Singapore on the world map as a leader in speech recognition technology when his team trounced 45 other world-class contenders in August last year at a voice matching shootout.

Like a fingerprint can be used to zero in on a person, so can his voice – even over the phone – using Haizhou's speech recognition technology.

Out of more than 10,000 voice samples, his 12-member team correctly matched 98 per cent of the voices speaking in different languages in the tests held by the National Institute of Standards and Technology – a standards agency of the United States.

Dubbed Bag-of-sounds, Haizhou's speech recognition technology – published two years ago – works for spoken languages or dialects, even those without a written language.

The concept was so novel that

He hears voices

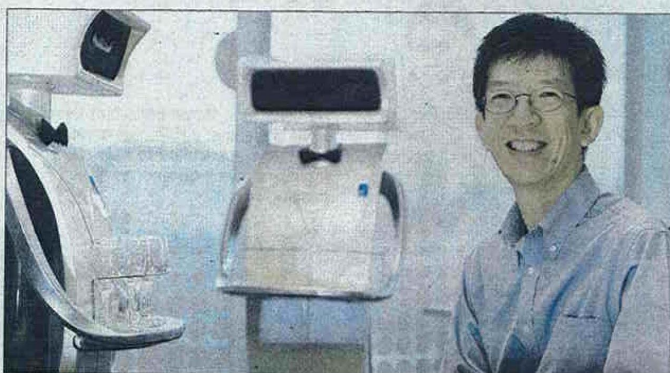
Haizhou – the head of human language technology at the Institute of Infocomm Research – became famous in the speech technology community.

The Bag-of-sounds is being used in commercial applications. He declined to give examples because he has signed contracts not to disclose the users of the technology.

His work has won him a seat two months ago on the 14-member board of the International Speech Communication Association, the world's largest professional organisation on speech

communication science and technology. When he starts his four-year term next month, he will be the first South-east Asian to sit on the board of this 20-year-old association.

Even before he reached research celebrity status, his peers in Finland recognised his contributions to speaker and language recognition research and nominated him for a Nokia Foundation award. The 14-year-old foundation supports the development of information and telecommunications technologies in Finland.



Dr Li Haizhou has won many awards for his work in voice recognition technology.

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As part of the award, he was appointed as one of only two Nokia Visiting Professors this year by the foundation to be the visiting professor to University of Joensuu in Finland.

He is the second Asian to be accorded this award.

Born in Chaozhou, China, Haizhou – who speaks Teochew, Cantonese, Mandarin, English and French – grew up in a rural fishing village in China. A Singapore citizen since 2000, he was fascinated by robots and dreamed of going into the field of artificial intelligence when he was a youth.

He received his PhD in Electrical & Electronic Engineering from the South China University of Technology in 1990.

Haizhou derives his deepest sense of accomplishment when people use his technology in their daily lives.

An example is the speech recognition feature introduced in 2002 into Changi Airport's Telephone Flight Inquiry Service.

The voice recognition smarts won a Singapore National Infocomm Award in 2002.

"Taxi drivers love it," he said of the flight information service that is accessed purely by voice besides the dialling of a toll-free number. "They use it to check for the number of incoming flights so they know when to head towards the airport," he adds with a smile.

By Tan Chong Yaw

More reports on page 12