

## \$120m tripartite tie-up aims to improve IoT technology



At the agreement-signing ceremony yesterday at GlobalFoundries in Woodlands were (from left) Dr Siah Soh Yun, GlobalFoundries Singapore vice-president of technology development; Mr K. C. Ang, GlobalFoundries Singapore senior vice-president and general manager; Ms Chan Lai Fung, Permanent Secretary (National Research and Development) and Agency for Science, Technology and Research chairman; Deputy Prime Minister and Minister for Finance Heng Swee Keat; Nanyang Technological University president Subra Suresh; and NTU vice-president of research Lam Khin Yong.

PHOTO: NANYANG TECHNOLOGICAL UNIVERSITY

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### Govt, chipmaker GlobalFoundries and NTU join hands on R&D in data storage

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Technology that will make driverless cars, home sensors and other devices in the Internet of Things (IoT) more durable and cheaper will be researched and developed in Singapore under a new tie-up between the Government, semiconductor firm GlobalFoundries and the Nanyang Technological University (NTU).

Yesterday, GlobalFoundries Singapore, NTU and the National Research Foundation (NRF) announced a \$120 million-in-cash-and-in-kind partnership to conduct research on resistive random access memory (ReRAM) over four years. The three parties did not disclose each individual share for the collaboration, which started last year.

ReRAM, which is a step up from current methods of storing and managing data, will allow IoT devices to be stored in a smaller physical space, have higher performance in reading and writing of data, be more energy efficient and have lower production costs.

Deputy Prime Minister and Minister for Finance Heng Swee Keat, who is also chairman of NRF, said the agreement was the largest corporate research partnership with academia to date, and held up the ability for such partnerships to create jobs.

He said: "The Government would like to encourage more companies - not just in semiconductors, but across different industries - to form meaningful partnerships with academia. Such research partnerships help to retain high-value advanced manufacturing as a core pillar of our economy, as we move towards an innovation-driven future.

"This is one way that our investments in research and development can be translated into more good jobs for our people."

Currently a nascent field in technological research, ReRAM builds on the random-access memory (RAM) system that today's automotive systems, portable devices and all other electronics use.

A joint release by GlobalFoundries, NRF and NTU said devices with ReRAM would have faster read-write speeds and consume less power - qualities useful in the application of IoT devices.

While the three parties did not disclose the breakdown for the agreement, some of the funding for the research will come from the \$19 billion Research, Innovation and Enterprise 2020 masterplan.

The ReRAM research and development agreement will bring together around 70 researchers from NTU and GlobalFoundries, including at least 16 postgraduate trainees under the Economic Development Board's Industrial Postgraduate Programme, to develop critical research and development skills through industrial attachments.

The university's vice-president of research, Professor Lam Khin Yong, said: "Singapore's tripartite model of research partnership between private, public and academic sectors plays an important role in ensuring that research done in the lab will have an eventual commercial application, which helps drive the nation's Industry 4.0 transformation.

"It is also very timely for NTU to partner GlobalFoundries Singapore to train new talents in the emerging field of ReRAM and to pioneer this next-generation memory technology for IoT."

Calling the partnership a "a win for Singapore and our people", Mr Heng said Singapore needs a strong supply of talent to support its research and innovation efforts in advanced manufacturing.

"Your partnership strengthens Singapore's position as an innovation-driven economy, and will allow us to continue creating new and exciting career opportunities for our people," he said.

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