

NXP and NTU Singapore Launch 'Smart Mobility Test Bed' to Accelerate the Introduction of Life-Saving Vehicle Communications

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New NTU-NXP Smart Mobility Test Bed Makes Singapore an Innovation Hub for Secure Connected Cars and Intelligent Transport Systems

EINDHOVEN, Netherlands, April 10, 2015 (GLOBE NEWSWIRE) -- NXP Semiconductors N.V. (Nasdaq:NXPI), technology leader in secure connected cars, today announced it signed an agreement with Singapore's Nanyang Technological University (NTU), ranked the world's top young university, to establish a living, real-world smart mobility test bed on the NTU campus. Supported by Singapore Economic Development Board, the joint initiative paves the way for Singapore's ['Smart Mobility 2030'](#) vision, making the city-state a global innovation hub for intelligent transport systems. It is also an important step to accelerate the introduction of life-saving vehicle communications globally.

NXP joined forces with NTU students and professors to develop and test 'Smart Mobility' solutions in high-pressure real-life scenarios with a focus on secure Vehicle-to-Everything (V2X) communications. V2X are intelligent systems integrated into vehicles, which are capable of wirelessly collecting and analyzing data from other vehicles and surrounding smart infrastructure over a distance of up to two kilometers.



Secure V2X will be critical to enable widespread adoption of fully autonomous driving and to improve road safety and traffic flow by giving drivers advanced warning of upcoming hazards such as dangerous road conditions, unexpected traffic jams, approaching emergency vehicles or road works long before they enter their field of vision or become detectable by other Advanced Driver Assistance System (ADAS) sensors. According to a study conducted by the U.S. Department of Transportation, secure V2X safety functions can reduce multi-vehicle accident figures by more than 80 percent. V2X-capable vehicles will also be capable of receiving information from intelligent road signs and automatically recognizing the operating cycle of traffic lights.

NTU has the largest university campus in Singapore, with an extensive internal transport network of cars, buses, bicycles, and even electric vehicle prototypes servicing its 35,000 students and faculty members. The new S\$22 million Smart Mobility test bed will leverage this network, using 100 V2X enabled vehicles and 50 roadside units to explore a range of smart communications use cases in a four-year trial. The NTU-NXP initiative will focus on various core areas critical to the advancement and real-world adoption of secure V2X. These include the enhancement of V2X communications for maximum reliability as well as the security of systems against potential cyber threats, which is essential for ensuring safety of passengers and protecting drivers' personal data.

NXP and NTU are inviting other high-tech companies, institutes, and government agencies to join forces with them and build a Smart Mobility Consortium aimed at researching and testing secure, smart connectivity and mobility solutions that can improve the traffic flow in inner cities, avoid road accidents, and enhance the mobility experience. Plans involve installing further technologies on the campus to simulate the future smart city.

"More roads, tunnels, or overpasses will not solve the traffic challenges in global megacities in the long run. What we need is more intelligent transport systems. Wireless communication technologies like secure V2X will bring significant benefits to society, saving lives by avoiding road accidents as well as limiting congestion, travel time and CO₂ emissions," said Drue Freeman, senior vice president, global automotive sales and marketing at NXP. "With this joint initiative with NTU and other leading industry partners we are embracing an opportunity to make the secure, smart connected city a reality sooner and bring Singapore to the forefront of smart mobility innovation."

NTU Chief of Staff Prof. Lam Khin Yong explained: "Over the past year, we have started to transform NTU into a living lab, starting with our EcoCampus initiative, which saw the deployment of Singapore's largest solar power plant, the test bedding of various electric vehicles, and the installation of smart building technologies. This partnership with NXP is

another big step forward in the transformation of the NTU campus, as the university continues to develop next generation technologies that will contribute to Singapore's smart mobility eco-system and network."

Lim Kok Kiang, Assistant Managing Director of the Singapore Economic Development Board (EDB), said: "EDB is happy to partner NTU and NXP to build up this test-bed. Through this effort, NTU, NXP and other industry partners will also enhance key capabilities for Singapore, such as wireless communications design, data analytics and network security."

About NXP Semiconductors

NXP Semiconductors N.V. (Nasdaq:NXPI) creates solutions that enable Secure Connections for a Smarter World. Building on its expertise in High Performance Mixed Signal electronics, NXP is driving innovation in the application areas Connected Car, Security, Portable & Wearable and Internet of Things. NXP has operations in more than 25 countries, and posted revenue of \$5.65 billion in 2014. Find out more at nxp.com.

About Nanyang Technological University

A research-intensive public university, Nanyang Technological University (NTU) has 33,000 undergraduate and postgraduate students in the colleges of Engineering, Business, Science, Humanities, Arts, & Social Sciences, and its Interdisciplinary Graduate School. It has a new medical school, the Lee Kong Chian School of Medicine, set up jointly with Imperial College London. NTU is also home to world-class autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies, Earth Observatory of Singapore, and Singapore Centre on Environmental Life Sciences Engineering – and various leading research centres such as the Nanyang Environment & Water Research Institute (NEWRI), Energy Research Institute @ NTU (ERI@N) and the Institute on Asian Consumer Insight (ACI). A fast-growing university with an international outlook, NTU is putting its global stamp on Five Peaks of Excellence: Sustainable Earth, Future Healthcare, New Media, New Silk Road, and Innovation Asia. Besides its main campus, NTU also has campuses in one-north, Singapore's science and tech hub, in Novena, Singapore's medical district, and at Gillman Barracks, Singapore's contemporary arts cluster.

For more information, visit www.ntu.edu.sg

Forward-looking statements

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