Singapore’s Largest ICM Research Institute Partners China’s Leading Electric Vehicle Provider to Advance Autonomous Vehicle Capabilities

Joint Lab combines A*STAR’s I²R’s Autonomous Vehicle capabilities and BYD’s expertise in electric vehicles to foster clean technology innovations

1. **Singapore, 29 January 2014** – Look out for more than 100 electric vehicles on the roads soon. Also known as EVs, this new fleet is also a R&D work in progress. A*STAR’s Institute for Infocomm Research (I²R) and BYD Company Limited, one of China’s largest companies specialising in battery technologies, have signed a joint laboratory agreement to develop electric vehicles with autonomous vehicle systems to advance clean technology in Singapore’s smart transport system. BYD plans to invest S$24m cash into the I²R-BYD Joint Laboratory.

2. The joint laboratory will leverage on I²R’s deep vehicle expertise in integrating Autonomous Vehicle (AV) technologies and combine BYD’s state-of-the-art electric vehicle (EV) capabilities to develop:
   a) Drive-by-Wire system in BYD’s electric cars using electronic controls to activate the brakes, control the steering and operate other systems in the vehicles.
   b) Autonomous Vehicle fleet management system that can dynamically allocate AV resources based on real time information or vehicle-location, route, and origin-destination information.
Autonomous Vehicle Technologies in Electric Vehicles

3. As Singapore’s largest ICM research institute, I²R will implement its primary cutting-edge autonomous vehicle sensory system that collects data on AV intelligence and AV fleet management in these electric vehicles.

4. These data will be useful for the AV robotic intelligence to learn situation awareness in the context of Singapore traffic rules, road environment and to make intelligent judgements based on predicted and typical responses of drivers. This enables the driverless system to co-exist seamlessly, predictably and safely with human-driven vehicles in the future.

5. BYD is an experienced developer of EVs for a global market and the leading manufacturer of advanced, environmentally-friendly battery technologies such as the Iron Phosphate battery used in BYD electric vehicles and buses. The company was ranked first in Bloomberg’s and Business Week's 2009 Tech100 List and is actively promoting the use of EVs on a global basis.

6. Dr. Lee Shiang Long, Executive Director of I²R said, “I²R is very proud to be able to attract BYD, one of China’s largest companies specializing in electric vehicles to invest in Singapore and jointly develop more than one hundred electric cars with autonomous capabilities for test-bedding purposes. With I²R’s expertise in the autonomous vehicle technologies, BYD’s vast experience in electric vehicles and strong support from the relevant Singapore authorities, we hope to benefit the transport industry in Singapore and countries all over the world.”

7. Mr. Liu Xueliang (刘学亮), General Manager of BYD Asia-Pacific Auto Sales Group, said, “Intelligent cars will be one of the most important directions for the transportation industry in the future. The collaboration between BYD and I²R, Singapore’s largest ICM research institute, with its deep knowledge in autonomous vehicle technologies, is going to be an exciting journey for us. We believe that a new energy vehicle embedded with autonomous driving technologies will provide drivers with a completely different driving experience.”

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About Institute for Infocomm Research (I²R)

Singapore’s largest ICT research institute, I²R (pronounced as i-squared-r) is a member of the Agency for Science, Technology and Research (A*STAR) family. Established in 2002, our vision is to power a vibrant and strong infocomm ecosystem in Singapore. I²R focuses on conducting mission oriented research to address key challenges faced locally. At I²R, intelligence, communications and media (ICM) form our 3 strategic thrusts. Our research capabilities are in information technology, wireless and optical communication networks, interactive and digital media, sensors, signal processing and computing. We perform R&D in ICM technologies to develop holistic solutions across the ICM value chain and we believe that the greatest impact is created when research outcomes are translated into technologies our partners can readily deploy at a competitive advantage. For more information about I²R, please visit www.i2r.a-star.edu.sg.

About A*STAR

The Agency for Science, Technology and Research (A*STAR) is Singapore’s lead public sector agency that fosters world-class scientific research and talent to drive economic growth and transform Singapore into a vibrant knowledge-based and innovation driven economy.

In line with its mission-oriented mandate, A*STAR spearheads research and development in fields that are essential to growing Singapore’s manufacturing sector and catalysing new growth industries. A*STAR supports these economic clusters by providing intellectual, human and industrial capital to its partners in industry.

A*STAR oversees 20 biomedical sciences and physical sciences and engineering research entities, located in Biopolis and Fusionopolis as well as their vicinity. These two R&D hubs house a bustling and diverse community of local and international research scientists and engineers from A*STAR’s research entities as well as a growing number of corporate laboratories.

Please visit www.a-star.edu.sg
About BYD

BYD Company Ltd. is one of China’s largest companies to have successfully expanded globally. Specializing in battery technologies, their green mission to “solve the whole problem” has made them industry pioneers and leaders in several High-tech sectors including High-efficiency Automobiles, Electrified Public Transportation, Environmentally-Friendly Energy Storage, Affordable Solar Power and Information Technology and Original Design Manufacturing (ODM) services.

As the world’s largest manufacturer of rechargeable batteries, their mission to create safer and more environmentally friendly battery technologies has led to the development of the BYD Iron Phosphate (or “Fe”) Battery. This fire-safe, completely recyclable and incredibly long-cycle technology has become the core of their clean energy platform that has expanded into automobiles, buses, trucks, utility vehicles and energy storage facilities. BYD and all of their shareholders, including the great American Investor Warren Buffett, see these environmentally and economically forward products as the way of the future.

BYD has made a strong entrance to the North, Central and South American markets with their battery electric buses, and lineup of automobiles. Their mission lies not just in sales growth, but also in sociological integration and local job creation as they have poured incredible investments into developing offices, dealerships and manufacturing facilities in the local communities they now call home, truly a first for Chinese companies. For more information, please visit www.byd.com or www.facebook.com/bydcompany.