Press Release   
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**Remote-Controlled Forklift via 5G – Thailand’s First Industrial Use Case by SCG/AIS/PSU Offering More Efficiency and Safety**

* Thailand has gained another crucially technological advancement made possible by leading business conglomerate in the ASEAN, SCG and no. 1 digital technology, AIS in collaboration with Prince of Songkla University (PSU). For the first time in Thailand, the three organizations have successfully demonstrated the use of 5G technology for industry. The experiment was endorsed by the National Broadcasting and Telecommunications Commission (NBTC).
* 5G technology was utilized to operate an unmanned forklift via AIS 5G network. The unmanned forklift was parked at SCG plant in Saraburi while the operator attempted to control it at SCG Headquarters in Bangsue, Bangkok. SCG operator was able to operate the forklift fluidly, maneuvering palettes from point A to point B accurately in real-time. This 5G industrial test paves way to increased productivity and safety, and opportunity for staff remote-training. It has become an important model for other industries to follow.
* SCG and AIS have signed an MOU in research and innovation development using 5G network for multiple projects, plus staff competency to put Thai performance at the world's frontline. The two giants intend to build 5G ecosystem together to enhance sustainable innovations and increase Thailand's industrial competitiveness as well as the living quality of Thai people.

**Mr. Attapong Sathitmanothum, Director - Mechanization Automation & Robotics (MARs) and Industry 4.0, SCG** said, “SCG aims to improve work operations in various fields and across business units including cement and building materials, packaging, and chemicals. We would like to enhance our company’s capabilities steadily and sustainably. A working group in Mechanization, Automation, and Robotics or MARs, along with Industry 4.0, has been established in 2016 to be a catalyst in leveling production process up to achieve Smart Factory by integrating MARs technology and Industry 4.0 together. With an investment over 860 million baht during the first three quarters of 2019, SCG has achieved several solutions including a predictive maintenance to notify us before the machine breakdown (Smart Maintenance), use of robot in laboratory (Smart Laboratory), automated dispatching system that provides cement to customers automatically (Smart Dispatching), and use of digital technology enabling data accessibility throughout supply chain so that everyone can utilize the same data as single source of truth, perform data analytics to improve our competitiveness, and enhance our responsiveness to customers’ needs.

SCG stresses the importance of cooperative networking with intelligent and skilled organizations towards work success and speediness. Hence, it is a good initiative when SCG collaborates with AIS on this regard so SCG customers can receive products and services more efficiently and Thailand’s industry can leap further from our collaboration and optimization.

The project of remote-controlled forklift via 5G took place first at SCG plant in Saraburi where large numbers of raw materials and products are subject for moving. Forklift was chosen as a prototype due to its ease of operation in material mobility. If succeed, SCG could move on to applying 5G technology with other equipment and aspects. The forklift test confirms fast response in real-time and accuracy in data transfer necessary for advanced automated configuration. In addition, the proven capability in remote controlling can increase work productivity as drivers can operate forklifts from any location, and trainers can provide long-distance trainings to staff in various locations simultaneously and conveniently.

5G technology can strengthen SCG efficiency in many ways. Workers will be safer especially for machineries working in risky area such as mining zones and confined space such as in the cement kiln. Efficiency will be increased as transmitting big data becomes easy. A number of plants located in different locations can send data to control center capable of managing information in real-time and centralization. Customers will be more satisfied because logistics will become more effective. For example, SCG can incorporate IoT into Smart Home to provide convenience as well as safety to home living. Lastly, 5G will benefit SCG people development programs tremendously, truly aligning with our Industry 4.0 direction.”

**Mr. Wasit Wattanasap, Head of National Network Operation and Support at AIS** said, “5G technology will dramatically change the way we do things in Thailand. It is capable of revolutionizing national industry and fulfilling Thailand 4.0 policy. Users will benefit in three ways: faster data speed, IoT connectivity, and stable and responsive network. As national leader in digital technology, AIS is committed to bring advanced technology to support driving of Thailand 4.0 policy for the benefits of Thai people.

AIS is the first to complete 5G testing nationwide. We welcome developers, researchers, students and individuals to work with us, testing 5G in multi-dimensions to understand how it works and how it can better digital economy and living quality of Thai people. AIS has proven ready to be the center for creating ecosystem specializing in innovation and delivering best customer experiences to users of all generations and all regions.

The collaboration among AIS, SCG and PSU marks a significant milestone in Thailand's 5G test. Through NBTC consent, the 2.6 gigahertz bandwidth was utilized to demonstrate forklift's remote operation in Saraburi province while the operator was controlling it in Bangkok, about 110 kilometers away. The result was a success, reiterating that 5G technology will definitely play an important role in Thailand’s future businesses. Needless to say, developing 5G ecosystem involves a few players including government, companies, and academic. Everyone has a part to play to promote and support 5G innovation, and to make Thailand capable to compete in the global market.”

**Associate Professor Dr. Peerapong Teekasakul, Director of Innovation Hub at Council of University Presidents of Thailand** said, “In the past, Prince of Songkla University through the Institute of Research and Digital Innovation has been actively conducting research and development with private- and industry sectors. We co-study and co-test 5G technology in many dimensions with our goals to building and preparing the new technology ready for actual industrial usages which, in turn, will increase competitiveness for Thailand’s industry. PSU receives funding for 5G study from Innovation Hub, Ministry of Higher Education, Science, Research and Innovation, to create an advanced intelligence platform for vehicles operable with low-latency controlling system via 5G AIS network. We hope the test results will lead to use cases in Thailand’s industry in the near future.”

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