



K-ITS Roadshow

Hosted by Ministry of Land, Infrastructure, and Transport (MOLIT)

Organized by Intelligent Transport Society of Korea (ITS Korea)

Date & Time September 17th(Tue) 2024, 10:00~18:00

Venue Dubai E Room, Dubai World Trade Center

Date & Time		Program	
9. 17(Tue)	10:00~ 10:05	(5')	[MOLIT] Opening Remarks (Woo-Jae Lee, Assistant Minister) [ITS KOREA] Welcoming Remarks (Cheong-Hoe Heo, Chairman)
	10:05~ 11:15	(70')	[Topic 1] Mobility for Sustainable Future
			[LOTTE INNOVATE] Self-driving Shuttle, EV Charger, Metaverse
			[BITSENSING] ITS Traffic Control System Demonstration Project / '24 K-City Overseas Demonstration Project
			[SPACE INSIGHT] R&D Projects in Progress based on the Company's Solution
	11:15~ 12:00	(45')	[SK PLANET] Detecting Road Hazards with Sound & AI / Introduction to AI-Audio based Road Hazard Information System
			[LG ELECTRONICS] LG Advanced V2X Solutions for RSU Protection
			[Topic 2] Core Technology for Implementation of Automated Driving
	14:00~ 18:00	(240')	[AUTOCRYPT] V2X Cybersecurity and Autocrypt's Solution
			[ETTIFOS] Why 5G-V2X Technology is Essential for the Future of Fully Autonomous Vehicles
			[WAYS1] Digital-twin Advanced Road Traffic Management Platform (LDM-TWIN) based on Local Dynamic Map Technology
			Biz-Matching & Networking

※ If you wish to arrange a biz-match meeting with a Korean company, please message ITS KOREA via the Dubai World Congress app or visit Korean Pavillion Booth (H6-E9).



LOTTE INNOVATE

Create a valuable future with IT
Based on IT know-how and technology in all industries, including retail, manufacturing, logistics, finance and healthcare We will create a smart world by combining cutting-edge technologies such as AI, Bigdata, IoT, and Cloud.



bitsensing

Radar Reimagined: Bringing Radar Everywhere, Better Life with Radar. bitsensing is revolutionizing safety and intelligence with innovative radar technology, providing solutions in smart cities, ITS, mobility, and digital healthcare.



SpaceInsight
AI for Space and Mobility Insight

Founded in 2021, Spacelnsight Co., Ltd. specializes in big data analysis, spatial information processing, and AI-driven solutions for urban planning and transportation. Our company focuses on integrating advanced technologies to shape the future of cities.



SK planet

SK Planet is recognized for its extensive expertise in ICT solutions, marketing platform/solutions, and data solutions. Our cutting-edge technologies enable us to provide ICT solutions in various technology fields, such as mobile communications, artificial intelligence, mobility, media, IoT, and more.



LG Electronics

LG Electronics is a 'Smart Life Solutions Company' focusing on Home Appliances, & Air Solutions, Home Entertainment, Vehicle Components and Business Solutions. As a trusted and innovative partner, we are dedicated to providing next-level experience and bringing human-centric innovations to the ITS industry.

AUTOCRYPT

AUTOCRYPT is an automotive cybersecurity and mobility solutions provider, dedicated to software-defined, connected, and autonomous mobility. Our goal is to deliver on tomorrow's promises for better mobility and transportation, we need a vehicular environment that is secure for those inside and outside the vehicle.



ETTIFOS®

Ettifos is a Vehicle-to-Everything (V2X) solutions provider focused on enabling the most advanced smart city and infrastructure deployments, as well as level 4+ autonomous driving. Our vision is to connect all entities in motion, creating a world with no accidents, net-zero emissions, and reliable autonomous vehicles for everyone.

WAYS1

WAYS1 specializes in geo-spatial information, developing and providing services for navigation map, HD (High Definition) maps and local dynamic map for automated driving systems. Currently we are focusing on the infrastructure system of autonomous cooperative driving and digital-twin advanced traffic management platform.



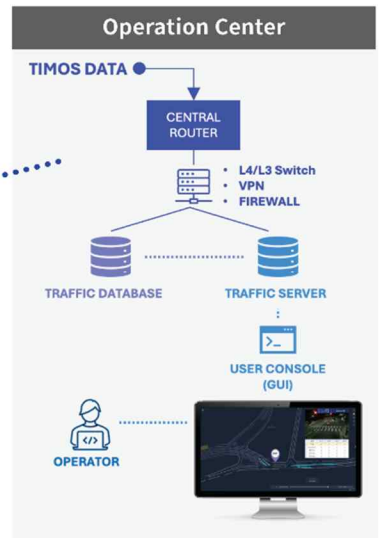
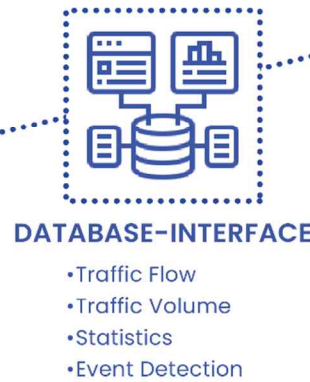
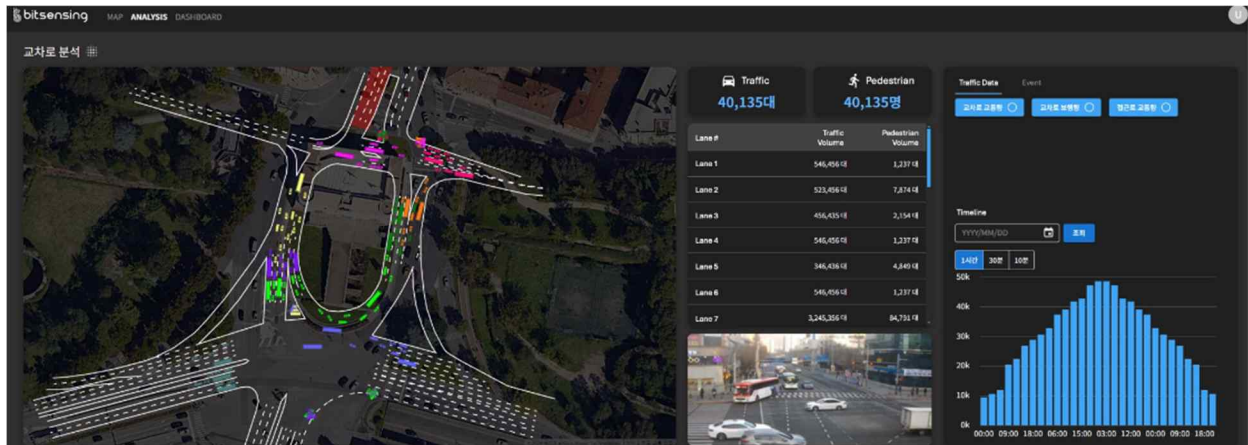
LOTTE INNOVATE

<p>Company Overview</p>	<p>Create a valuable future with IT Based on IT know-how and technology in all industries, including retail, manufacturing, logistics, finance and healthcare We will create a smart world by combining cutting-edge technologies such as AI, Bigdata, IoT, and Cloud.</p>
<p>Company Product/Solution</p>	<p>[Autonomous Shuttle] The next generation of environment-friendly transportation, a level-4 driverless, autonomous driving shuttle Building a real-time intelligent transportation system that can operate level-4</p> <p>[EV Charger Platform] Best in all areas, manufacturing, installing/operating a full lineup of electric vehicle chargers</p> <p>[LOTTE Metaverse] The hyper-realistic metaverse platform allows users to access and purchase content and services such as shopping and entertainment from various companies, countries, and cultures, regardless of where they are</p>
<p>Point of Contact</p>	<p>SUYONG PARK, suyongpark@lotte.net, +82-10-7204-8890</p>





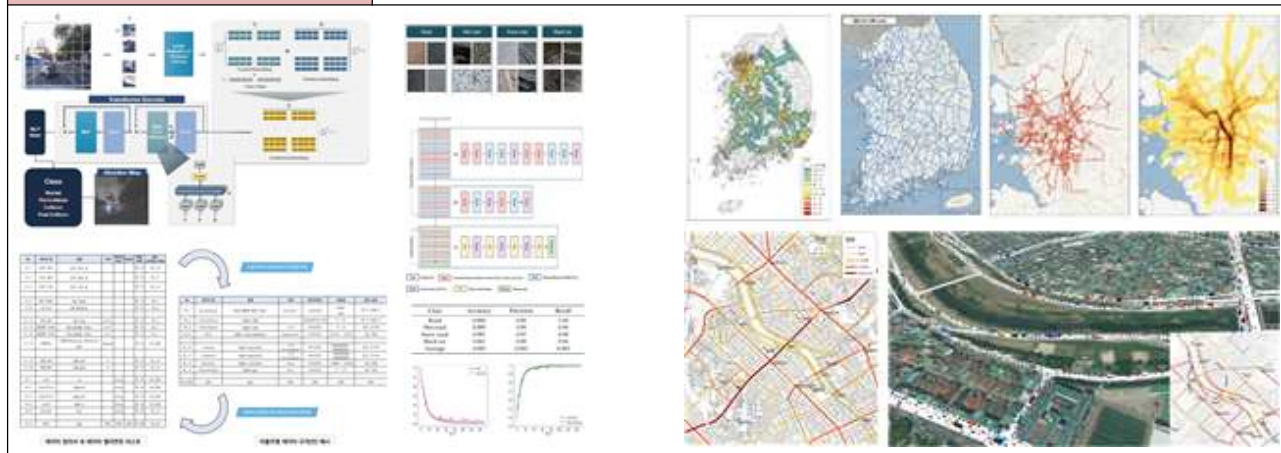
<p>Company Overview</p>	<p>Radar Reimagined: Bringing Radar Everywhere, Better Life with Radar. bitsensing is revolutionizing safety and intelligence with innovative radar technology, providing solutions in smart cities, ITS, mobility, and digital healthcare.</p>
<p>Company Product/ Solution</p>	<p>bitsensing's ITS solution, TraXight, applies radar data analysis to resolve urban traffic problems by providing real-time traffic monitoring, big data construction, major statistics, problem diagnosis, and AI simulation-based signal optimization consulting services for smart cities.</p>
<p>Point of Contact</p>	<p>Yoonsu LEE , jeff@bitsensing.com, +82-70-7114-1010</p>





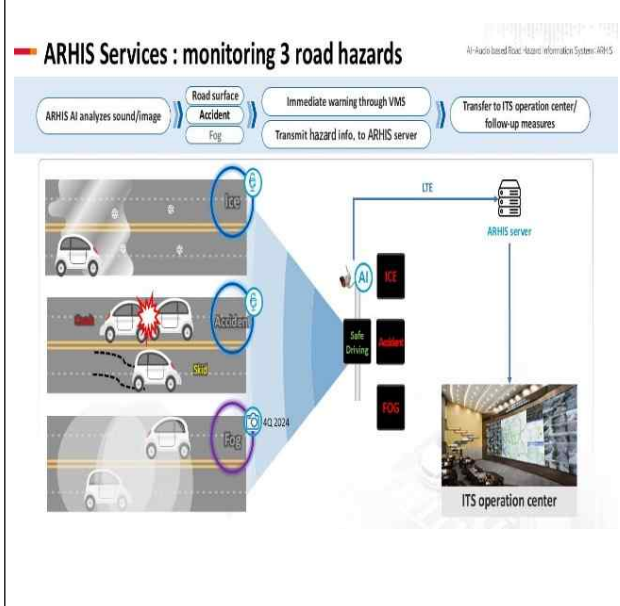
SpaceInsight
AI for Space and Mobility Insight

<p>Company Overview</p>	<p>Founded in 2021, Spacelnsight Co., Ltd. specializes in big data analysis, spatial information processing, and AI-driven solutions for urban planning and transportation. Our company focuses on integrating advanced technologies to shape the future of cities.</p>
<p>Company Product/Solution</p>	<p>1. Big Data Analysis & Consulting The company offers comprehensive big data analysis services for urban and transportation sectors, utilizing GIS and simulation tools like Vissim. The company also provides research consulting services, helping clients navigate complex policy landscapes and optimize their operations through data-driven insights.</p> <p>2. Autonomous Driving Technology R&D The company is deeply involved in the research and development of autonomous driving technologies. This includes applying AI-based algorithms for detecting anomalies in autonomous vehicle operations, developing remote control decision-making algorithms, and contributing to the creation of standards and guidelines for autonomous driving ethics and data management.</p> <p>3. Digital Transformation Solutions The company develops digital transformation solutions, including automated spatial information analysis tools and customized web and mobile applications. The company is actively engaged in creating API solutions tailored to specific user needs, enhancing operational efficiency across various domains.</p>
<p>Point of Contact</p>	<p>Jaemin Song, woldsthd@gmail.com, +82-10-6605-6251</p>





<p>Company Overview</p>	<p>SK Planet is recognized for its extensive expertise in ICT solutions, marketing platform/solutions, and data solutions. Our cutting-edge technologies enable us to provide ICT solutions in various technology fields, such as mobile communications, artificial intelligence, mobility, media, IoT, and more.</p>
<p>Company Product/Solution</p>	<p>ARHIS is a solution that uses AI to detect road surface hazards by listening to sounds occurring on the road. ARHIS devices, equipped with high-performance directional acoustic sensors, are installed at intervals of 70-100 meters on street lights or separate poles along the road to collect sounds. The AI embedded in the device analyzes the sounds in real-time to determine the occurrence and type of road hazards (including black ice, wet surfaces, dry surfaces, and accidents). Information about each segment (location, time of occurrence) and the type of road hazard is transmitted to a server and displayed on road traffic display boards (VMS, VSL) to increase drivers' awareness of the hazards and promote safe driving. The ITS Center can monitor real-time road conditions within its jurisdiction through a separate interface or existing integrated control screens.</p>
<p>Point of Contact</p>	<p>Andrew Woo, sy.woo@sk.com, +82-2-6119-3407</p>



Reference

AI-based Road Hazard Information System-ARHIS

ARHIS Global Footprint

- Korea : Seoul, Incheon, Gangneung etc.
- U.S. : New Jersey, Texas
- China : Jiangsu, Henan, Hebei
- Europe : Croatia

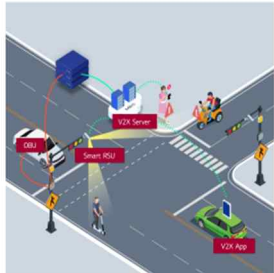
Below the map are images of ARHIS installations in various locations: New Jersey U.S., Texas U.S., Jiangsu China, Henan China, Hebei China, and Croatia.



<p>Company Overview</p>	<p>LG Electronics is a ‘Smart Life Solutions Company’ focusing on Home Appliances, & Air Solutions, Home Entertainment, Vehicle Components and Business Solutions.</p> <p>With the era of next-generation electric vehicles and autonomous driving just around the corner, we are confident as a leading developer of advanced automotive components and solutions. As a trusted and innovative partner, we are dedicated to providing next-level experience and bringing human-centric innovations to the ITS industry.</p>
<p>Company Product/Solution</p>	<p>LG Advanced V2X Solution includes,</p> <ul style="list-style-type: none"> • Soft V2X Application – Smartphone application for drivers, pedestrians, and cyclists • Smart RSU(including cameras and sensors) – Traditional RSU + Real-time video processing for road object information • Soft V2X Application Server(AS) – V2X Message relay, Service security, Monitoring and Data Analysis <p>LG Advanced V2X Solution supports,</p> <ul style="list-style-type: none"> • Conventional V2X(PC5) and V2N2X (Uu) simultaneously <p>LG Advanced V2X Solution provides,</p> <ul style="list-style-type: none"> • Collision detection and notification • School bus and Emergency Vehicles • Automatic mode change between Vehicle and Pedestrian • C-ITS service interworking
<p>Point of Contact</p>	<p>David DJ Kang, dongjin.kang@lge.com, +82-10-7512-3780</p>

LGE Advanced V2X Solutions

The solution consists of **Soft V2X Application, Smart RSU and Soft V2X AS.**

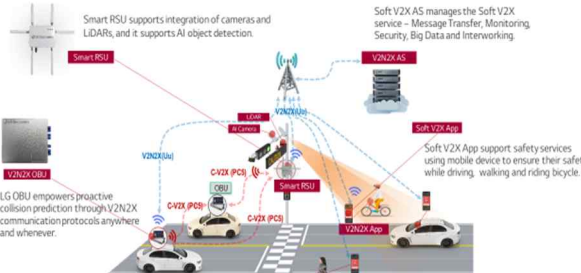


- 01 Soft V2X Application**
Smartphone application for drivers, pedestrians, and cyclists
 - TX and RX of V2X messages through Soft V2X AS
 - High accurate location using GPS/GNSS
 - Road safety risk measurement in real-time
- 02 Smart RSU (including cameras and sensors)**
Traditional RSU + Real-time video processing for road object information
 - Road user detection using cameras and sensors
 - Communication with Soft V2X application via Soft V2X AS
 - Communicate with conventional V2X device(OBU)
- 03 Soft V2X Application Server(AS)**
V2X Message relay, service security, monitoring and data analysis
 - Interconnection between V2X applications and smart RSUs
 - Data anonymization and V2X security management
 - Collection and analysis of V2X data

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System Architecture

Advanced Soft V2X Solution supports conventional V2X(PC5) and V2N2X (Uu) simultaneously.



Smart RSU supports integration of cameras and LiDARs, and it supports AI object detection.

Soft V2X AS manages the Soft V2X service – Message Transfer, Monitoring Security, Big Data and Interworking.

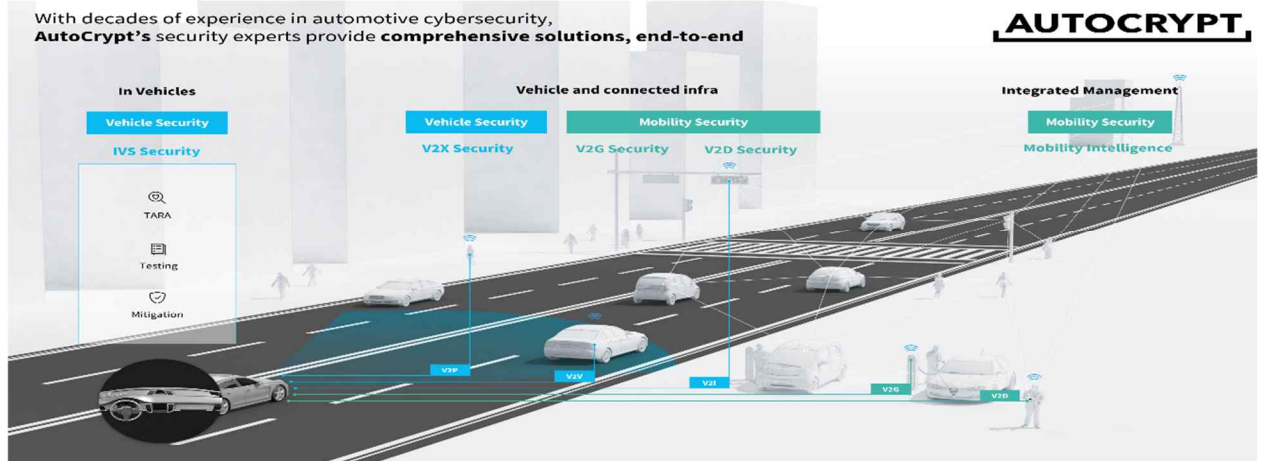
Soft V2X App support safety services using mobile device to ensure their safety while driving, walking and riding bicycle.

LG OBU empowers proactive collision prediction through V2N2X communication protocols anywhere and whenever.

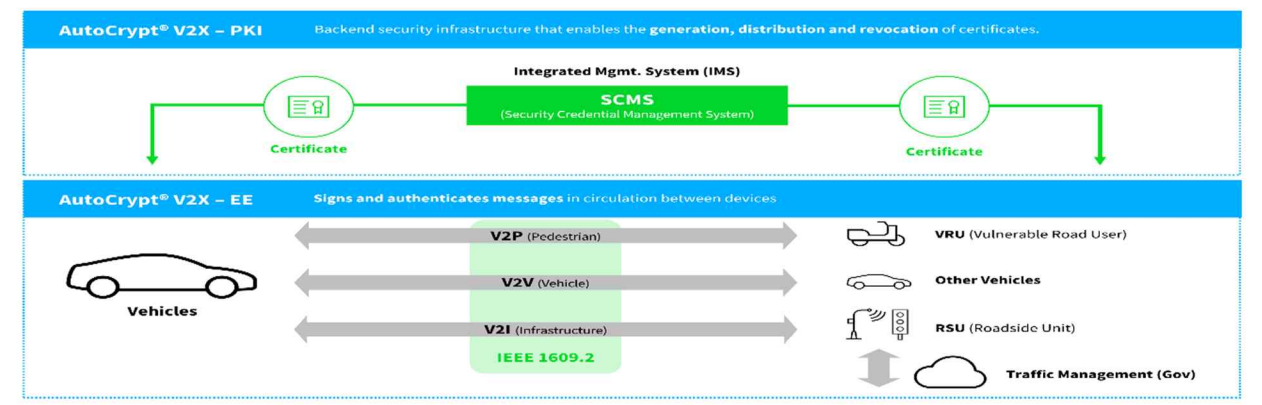
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AUTOCRYPT

<p>Company Overview</p>	<p>AUTOCRYPT is an automotive cybersecurity and mobility solutions provider, dedicated to software-defined, connected, and autonomous mobility. Our goal is to deliver on tomorrow's promises for better mobility and transportation, we need a vehicular environment that is secure for those inside and outside the vehicle.</p>
<p>Company Product/Solution</p>	<p>C- ITS/ V2X Security: AUTOCRYPT utilizes encryption and authentication technologies to safeguard the validity and privacy of V2X messages. On the frontend, a security module is embedded into V2X end-entities to encrypt and decrypt messages (AutoCrypt® V2X-EE). At the backend, a Security Credential Management System (SCMS) takes charge of certificate issuance, verification, and revocation (AutoCrypt® V2X-PKI).</p>
<p>Point of Contact</p>	<p>Martin Totev, martin@autocrypt.io, +82-2-2125-4019</p>



AutoCrypt V2X Security Solution



ETTIFOS®

<p>Company Overview</p>	<p>Ettifos is a Vehicle-to-Everything (V2X) solutions provider focused on enabling the most advanced smart city and infrastructure deployments, as well as level 4+ autonomous driving. We supply innovative and versatile OBU and RSU solutions, tailored to our customer's specific project and service requirements. We focus on connected mobility communication, applications in autonomous driving, and connected mobility-related safety and efficiency services. Our vision is to connect all entities in motion, creating a world with no accidents, net-zero emissions, and reliable autonomous vehicles for everyone.</p>
<p>Company Product/Solution</p>	<p>“Prometheus” RSU – Conventional RSU that supports LTE-V2X or DSRC standards for your smart infrastructure deployments.</p> <p>“V2X-AIR” Aftermarket OBU – A compact aftermarket OBU that enhances road safety and improves traffic efficiency, perfect for large scale deployments.</p> <p>“SIRIUS” OBU and RSU – A software-upgradable OBU and RSU solution that supports present and future mobility environments, making roads safer, greener, and more efficient for the long term.</p>
<p>Point of Contact</p>	<p>Jasurbek Khabibullaev, jasurbek@ettifos.com, +82-31-8039-5000</p>



“Prometheus” RSU
(LTE-V2X or DSRC)



“V2X-AIR” Aftermarket OBU
(LTE-V2X or DSRC)



V2X applications



“SIRIUS” OBU and RSU
(5G-V2X or LTE-V2X*)

WAYS1

<p>Company Overview</p>	<p>WAYS1 specializes in geo-spatial information, developing and providing services for navigation map, HD (High Definition) maps and local dynamic map for automated driving systems. Currently we are focusing on the infrastructure system of autonomous cooperative driving and digital-twin advanced traffic management platform.</p>
<p>Company Product/Solution</p>	<p>LDM : LDM is an abbreviation for Local Dynamic Map, which is an infrastructure system for autonomous vehicles. A solution that generates data by mapping all dynamic objects moving on the road onto a high-definition map. LDM- TWIN : The digital-twin advance traffic management platform (LDM TWIN) collects, aggregates, analyzes, and compiles road traffic information, which is received from LDM in real-time to provide accurate road traffic data based on digital-twin. Through this precise information, it analyzes the causes of traffic issues (such as congestion, accidents, and jaywalking) and suggests an improvement plan.</p>
<p>Point of Contact</p>	<p>Mr. KIM ING00 / igkim@ways1.com / +82-31-8069-7887</p>

