

Cybersecurity

Prevention measure against new types of threats to secure automated driving systems in a sustainable way

Yasumasa Hirai / Toyota Motor Corporation



Cybersecurity for Vehicles

- Advanced services such as adus are being implemented in society right now.
- Cybersecurity is essential for achieving both a safe society and attractive services.

Safety

Service

Cybersecurity



Cybersecurity for Vehicles

regurations

 Automotive industry started compliance with R155 regurations from July 2022.

◆ Need to migrate to operations and maintenance.



Theme in SIP-adus workshop 2022



What should we keep systems always safe from potential threats in order to attain sustainable safety and security?



What to attain sustainable safety and security

What should we keep systems always safe from potential threats in order to attain sustainable safety and security?

L/O Product development phase Post-development phase Responding rapidly and continuously Considering security countermeasures based on known threats. to potential threats. <Operations and maintenance> Risk Assessment Security Design Detect Secure Implementation **Functional Security Testing** IDS/IPS **Vulnerability Testing** V-SOC Recover



IDS/IPS: Intrusion Detection System/Intrusion Prevention system

V-SOC: Vehicle Security Operation Center

P-SIRT: Product Security Incident Response Team

Today's scope

Respond

P-SIRT

Today's Scope



Responding <u>rapidly</u> and <u>continuously</u> to <u>potential threats</u>.

Will it be possible to respond rapidly if each company responds individually?

Should we wait until our vehicle are attacked to discover potential threats?



Speaker Introduction



Group Vice President, Chief Cybersecurity Officer,
Cybersecurity & Risk Management, Toyota Motor North America, Inc.
The United States of America

Frank Kargl

Professorand and Institute Director, Institute of Distributed Systems,
University of Ulm, Germany

Shinichi Kan

Senior Associate, Technology Consulting, PwC Consulting, Japan

Tsutomu Matsumoto

Professor, Faculty of Environment and Information Sciences,
Yokohama National University, Japan





Session Start



