SIP-adus Workshop 2018

Cybersecurity

13th November 2018

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Cabinet Office

Cybersecurity Speakers

- **Moderator : Takashi Imai**
- **Speakers : 15min./ each speaker**

	Title	Name	Organization
1	Trend of Cybersecurity Regulation	**Shigeyuki Kawana**	JAMA
2	Drive Security From The Inside Out	**Chris Clark**	Synopsys Inc.
3	Current SIP-adus Activity for Vehicle-level Penetration Testing	**Hiroshi Nodomi**	PwC Consulting LLC
4	Automotive Fleet SIEM	**László Tóth**	Deloitte's Cyber Risk Services group
5	Cybersecurity Engineering and Assurance for Connected and Automated Vehicles	**Paul Wooderson**	HORIBA MIRA Ltd.
6	Automotive Cyber-Physical Security Testbeds and Applications	**Tsutomu Matsumoto**	Yokohama National University

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Introduction and Background

Takashi Imai
Toyota InfoTechnology Center

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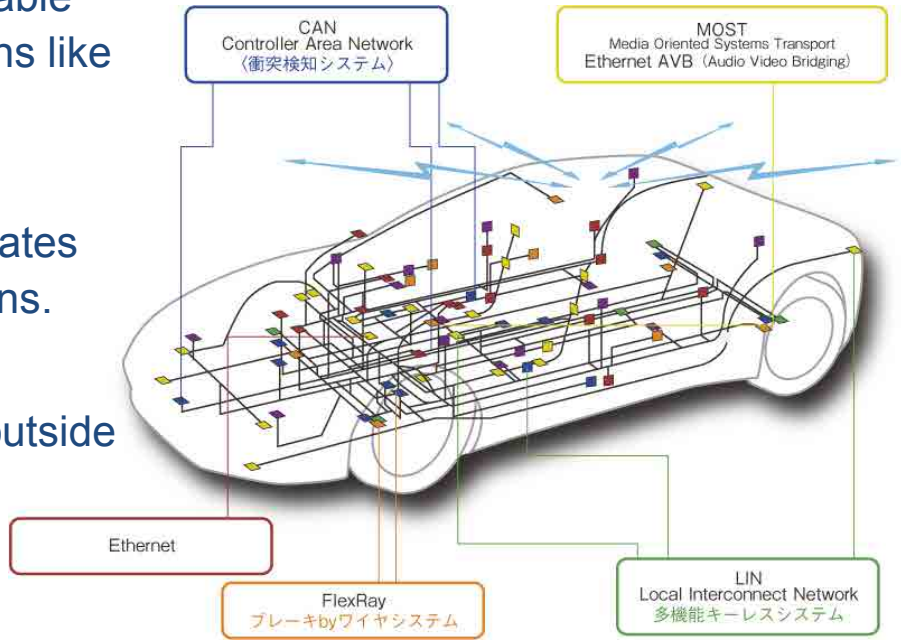
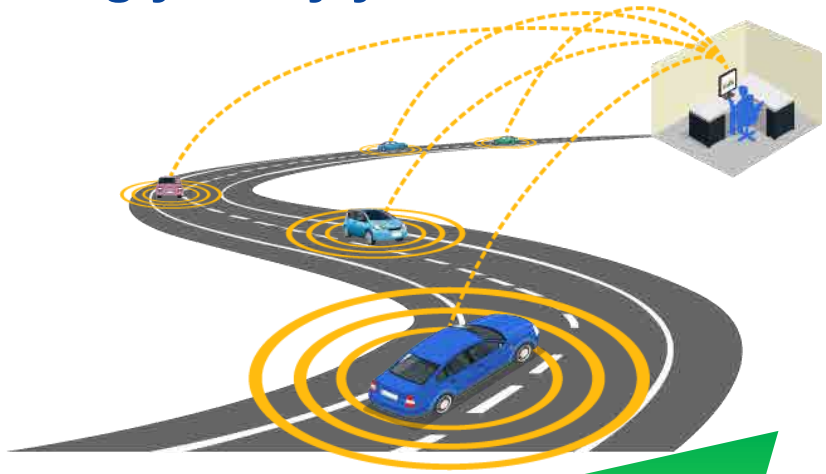
Progress to the Automated and Connected Vehicle

- Increasingly equipped with multiple ECU which are connected via a vehicle network
- It is necessary to provide with safe and comfortable mobility, as well as support for basic car functions like accelerating, steering and brakes
- Recently, it is common that a vehicle communicates with the outside through wireless communications.
- As a result, vehicle's cooperative functions for outside communications have dramatically improved



Trends in Vehicle Cybersecurity

The hacking performance has been improving year by year



Company A

Recall 1.4 million vehicles

2013

Injecting vehicle the commands by connecting the wire

2015

The first remote hacking

2017

Controlled a vehicle by remote hacking the multiple vulnerability

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Our Challenges

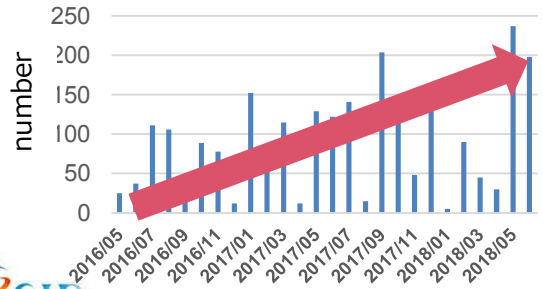
Activities of Automotive Cybersecurity directed towards legislate in 2020
with viewpoints of Automotive Industries, Security venders and Academia

Increase the risk of cyber-attacking to the vehicles

Forecast of new connected car sales ※1

2016	20 million cars	→	2025	55 million cars

Transition of the number of vehicle vulnerability report ※2



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International automotive standard and regulation related the countermeasure of cyber-attack

WP29 Regulation

ISO SAE INTERNATIONAL ISO21434

Countermeasure in developer's viewpoint

JasPar

Countermeasure in attacker's viewpoint

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The automotive industry as whole has to Closely collaborate

※1 Source: Fuji Keizai "Trends and Strategies on the Connected Car Market 2018"

※2 Source: PwC

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