



SIP-adus Workshop 2016

Summary Report

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SIP-adus International Cooperation WG



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Main themes of SIP-adus Workshop 2016

- **Announcement of SIP-adus Large-Scale Field Operational Test in 2017**
 - Share Regional activities and FOTs from various areas
- **Report from SIP-adus Research and Development activities**
 - SIP-adus Report Session
 - SIP-adus Report Panels

“SIP- adus”

- Mobility Bringing Everyone a Smile –

SIP : Cross-Ministerial Strategic Innovation Promotion Program
adus : Innovation of Automated Driving for Universal Services

SIP-adus Workshop 2016

Recognized as a specialized international conference on automated driving, participants from all over the world increased. Sharing latest information, building friendship among experts, were highly evaluated by the participants.

- **Organizer** : Cross-Ministerial Strategic Innovation Promotion Program, Council for Science, Technology and Innovation, Cabinet Office, Government of Japan
- **Date** : November 15-17, 2016
- **Venue** : Tokyo International Exchange Center
http://www.jasso.go.jp/tiec/index_e.html
Tokyo Academic Park
2-2-1 Aomi, Koto-ku, Tokyo 135-8630 Japan
- **Attendees** : 425 from 17 countries
- **Speakers** : 61 includes 34 speakers and moderators from overseas

Snapshot with speakers from overseas after Minister Tsuruho made a welcome speech at 15:00 on November 15



SIP-adus Workshop 2016 Program

■ Plenary Sessions and Breakout Workshops

	Tuesday November 15	Wednesday November 16	Thursday November 17 (Breakout Workshop)
AM	9:00 ~ 10:15 Opening & Keynote Session	9:00 ~ 10:30 SIP-adus Report Session	9:00 ~ 12:00 Breakout Workshop-1 Breakout Workshop
	10:30 ~ 12:30 Special Session Regional Activities and FOTs		
	SIP-adus Display		
PM	13:30 ~ 15:00 Dynamic Map	13:30 ~ 15:15 Next Generation Transport	13:00 ~ 15:00 Breakout Workshop-2
	15:20 ~ 16:35 Connected Vehicles		
	16:50 ~ 18:05 Security	15:30 ~ 17:30 Human Factors	15:30 ~ 17:00 Breakout Workshop Summary
	Preparatory meeting for Breakout Workshop		17:00 ~ 17:30 Closing Session

Opening Session

■ Session Summary

- Yoshio Yamawaki, Director General for Science , Technology and Innovation, Cabinet Office, welcomed participants and expressed expectation for the outcomes of SIP-adus Workshop 2016.
- Representatives from SIP-adus shared the status of Research and Development Activities.
- All speakers expressed the importance of the international cooperation and continuous efforts to deliver values for society from Connected and Automated Vehicle Technologies

■ Speakers and Title of Speeches

- **Yoshio Yamawaki**, Cabinet Office Japan : Oral only
- **Anne Berner**, Finnish Government : Oral only
- **Nicholas M. Hill**, Embassy of United States Tokyo Japan : Oral only
- **Ludger Rogge**, European Commission DG RTD : ***Connected and Automated Road Transport in Europe***
- **Friedemann Bruehl**, Japan Automobile Importers Association : ***A regulatory framework for connected and automated driving Towards a strengthened cooperation***
- **Edwin Nas**, Ministry of Infrastructure and the Environment, Netherlands: ***International cooperation in view of The Declaration of Amsterdam***
- **Chris Heffer**, British Embassy, Tokyo : ***UK Automotive Sector and Government Support***
- **Kazuo Kyuma**, Council of Science, Technology and Innovation, Cabinet Office : ***Science, Technology and Innovation Policy of Japan - Promotion of Automated Driving System -***
- **Seigo Kuzumaki**, SIP-adus Program Director, ***SIP Automated driving systems***



Mr. Yamawaki (Left) and Speakers



Regional Activities and FOTs

■ Session Summary

- Implementation of SIP-adus Large-Scale Field Operational Test for Automated Driving Systems was announced
http://en.sip-adus.jp/file/topics_20161115_PressRelease_en.pdf
- Guest speakers shared the various Regional Activities and FOTs

■ Session Contents

➤ Moderator

- Hajime Amano / SIP-adus International Working Group

➤ Speakers and Title of Speeches

- Masato Minakata / SIP-adus : **The outline of SIP-adus FOT**
- Alvaro Arrue / IDIADA : ***FOTs and activities in Europe***
- Iain Forbes / Department for Transport UK : ***Connected and autonomous vehicles in the UK***
- Jan Hellaker / Drive Sweden Program Director : ***Drive Sweden***
- Felix Fahrenkrog / BMW AG (Representing Jens Langenberg / VW) : ***“AdaptIVe” Automated driving applications and technologies for intelligent vehicles***
- Ludger Rogge / European Commission DG Research & Innovation : ***Connected and Automated Road Transport EC Activities***
- C.Y. David Yang / AAA Foundation for Traffic Safety USA : ***Automated Driving Technologies: Expectations and Impact on Traffic Safety***



Dynamic Map

■ Session Summary

- SIP-adus shared Dynamic Development status and activities of Dynamic Map Planning Co, Ltd.
- Guest speakers shared their activities

■ Session Contents

- Moderator
 - Maxime Flament / ERTICO – ITS Europe
- Report from SIP-adus and Title of Speeches
 - Ryota Shirato / Nissan : *Dynamic Map Development in SIP-adus*
 - Tsutomu Nakajima / Dynamic Map Planning Co., Ltd. : *Dynamic Map Planning*
- Guest Speakers and Title of Speeches
 - Carl Kenneth Andersen / U.S. DOT : *Dynamic Optimization of Connected Vehicle Data*
 - Jim Herbst / Ygomi : *Dynamic Data Handling for HAD*
 - Ahmed Nasr / HERE : *HD Live Map*



Welcome Speech by Minister Tsuruho

■ Summary

- Yosuke Tsuruho, Minister of State for Science and Technology Policy, welcomed participants and stated the importance of automated driving system, Japan's efforts for R&D and the importance of international cooperation for realizing society with automated driving system.



Connected Vehicles

■ Session Summary

- SIP-adus shared projects status related Connected Vehicles
- Guest Speakers shared their activities related Connected Vehicles

■ Session Contents

- **Moderator**
 - Vincent Blervaque / Independent Consultant and ITS Expert
- **Report from SIP-adus**
 - Prediction of the connected vehicle toward the connected and automated vehicle
 - Status of Connected and Automated Vehicle development in SIP-adus
- **Guest Speakers and Title of Speeches**
 - Vincent Blervaque : ***Status of C-ITS Deployment in Europe***
 - Frank Foersterling, Continental : ***Connected and Automated Driving Requirements for digital infrastructure***
 - Mikko Koskue, Finpro : ***Intelligent Vehicle Solutions from Finland***



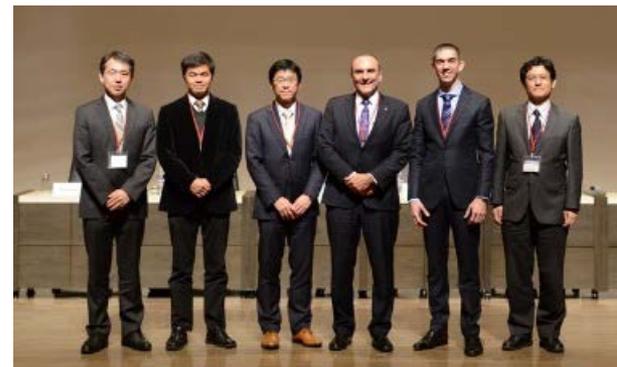
Security

■ Session Summary

- SIP-adus shared status related activities of Security Systems for Connected and Automated Vehicle applications
- Guest Speakers shared the issues of Automated Vehicle Security

■ Session Contents

- **Moderator**
 - Satoru Taniguchi / SIP-adus/Toyota Info Technology Center Co., Ltd.
- **Report from Japanese activities**
 - Risk Assessment Study on Threat cases of "Connected Car"
 - Real-Time Electrical Forgery for CAN and Its Countermeasure
 - JASPAR's activity towards the standardization of Cybersecurity
- **Guest Speakers and Title of Speeches**
 - **Michael E. Parris JP, SBD : *Security for the Autonomous Vehicle – Identifying the Challenges***
 - **Jonathan Petit, Security Innovation : *AUTOMATED VEHICLES SECURITY***



SIP-adus Report Session

■ Session Summary

- SIP-adus shared the major status of research and development activities

■ Session Contents

➤ Integration of Advanced Surface Transport Performance

1. SIP-adus and ART; why ART, How advanced?
2. Research on automatic controllability for ART
3. A research for improvement of quick transportability, time reliability and safety of Advanced Rapid Transit

➤ Development of roadside units for cooperative I2V

1. Research for advanced Traffic Signal Prediction Systems
2. Research for the advancement of DSSS, Driving Safety Support Systems, which utilize ITS radio communication

➤ Evaluation of GNSS for the Realization of the Autonomous car

1. Survey on basic evaluation for effective utilization of satellite positioning technology

Impact Assessment

■ Session Summary

- SIP-adus reported status of Impact study about Automated Vehicle Technologies for traffic accidents and CO2
- New view point of Economic Impact on other cars and other road users from Automated Vehicle Technologies was shared
- Guest speakers shared their approaches to Impact of Connected and Automated Vehicle technologies

■ Session Contents

- **Moderator**
 - Takashi Oguchi / SIP-adus/The University of Tokyo
- **Report from SIP-adus**
 - Development of traffic accident simulation to evaluate the benefits of safety systems for the reduction of traffic accidents”
 - Development of an evaluation tool for the impact assessment of Automated Driving Systems on CO2 emissions
- **Report from Japan**
 - Hiroaki Miyoshi, Doshisha University :
Who Enjoys the Benefits of Automated Driving Systems?
- **Guest Speakers and Title of Speeches**
 - Felix Fahrenkrog, BMW AG : *Impact Assessment*
 - Scott Smith, U.S. Department of Transportation :
Benefits Estimation for AV Systems
 - Deepa Rangarajan, SBD : *Vehicle autonomy – What will be the impact?*



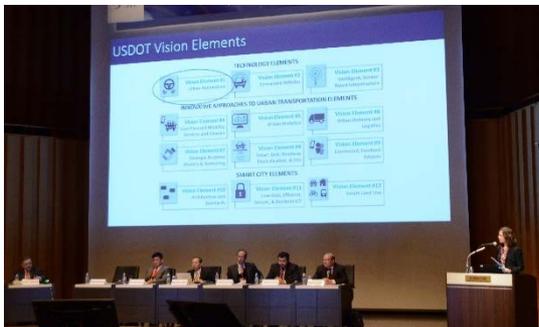
Next Generation Transport

■ Session Summary

- SIP-adus shared the status of research and development activities on Advanced Rapid Transport and Ecosystem of Automated Vehicle application
- Guest Speakers shared their activities and ideas for future transport using Automated vehicle technologies

■ Session Contents

- **Moderator**
 - **Steven E. Shladover** / University of California, Berkeley
- **Report from SIP-adus**
 - Ecosystem of Automated Driving for Next Generation Transport”
 - SIP-adus Next Generation Transport Activity Update - Study of Precise Docking
- **Guest Speakers and Title of Speeches**
 - **Elizabeth Machek** / U.S. DOT : ***US Activity in Transit Automation and Accessibility***
 - **Alan Ming Huat Quek** / Land Transport Authority Singapore : ***Singapore Autonomous Vehicle Initiative (SAVI)***
 - **Adriano Alessandrini** / Università di Firenze : ***CityMobil2 results and future challenges***
 - **Christian Rousseau** / RENAULT SAS : ***Next Generation of Transport Main Pillars***



Human Factors

■ Session Summary

- Message from Prof. Thomas B Sheridan was shared to encourage researchers and engineers on Human Factors
- SIP-adus shared status of research and development activities
- Guest Speakers shared their research and development status

■ Session Contents

➤ Moderator

- **Satoshi Kitazaki** / SIP-adus/National Institute of Advanced Industrial Science and Technology

➤ Report from SIP-adus

- Remarks on human factors in driving automation by Prof. Thomas B. Sheridan
- SIP-adus Human Factors and HMI research

➤ Guest Speakers and Title of Speeches

- **Emma Johansson** / Volvo Group Trucks Technology : ***HUMAN FACTORS IN VEHICLE AUTOMATION – Activities in the European project Adaptive***
- **Natasha Merat** / University of Leeds : ***What information do cyclists and pedestrians want when interacting with a fully Automated Road Transport Systems (ARTS)?***
- **Chris Monk** / U.S. DOT : ***Automated Vehicles Research***
- **Daniel V. McGehee** / University of Iowa : ***Engineering consumer understanding of higher levels of automation***
- **Myra Blanco** / Virginia Tech Transportation Institute : ***Mixed-Function Automation Naturalistic Study***



SIP-adus Display

■ The following reports were displayed at the site and now on the web

[Overview]

- Overview 01, 02 (SIP-adus - Cabinet Office)

[Roadmap]

- Roadmap 01 (Cabinet Secretariat)

[Dynamic Map]

- Dynamic Map 01 (SIP-adus - Cabinet Office)
- Dynamic Map 02 (SIP-adus - National Police Agency / Ministry of Economy, Trade and Industry)

[Connected Vehicles]

- Connected Vehicles 01 (SIP-adus - National Police Agency)
- Connected Vehicles 02, 03 (SIP-adus - Ministry of Internal Affairs and Communications)
- Connected Vehicles 04 (SIP-adus - Ministry of Land, Infrastructure, Transport and Tourism)
- Connected Vehicles 05 (Ministry of Land, Infrastructure, Transport and Tourism)

[Next Generation Transport]

- Next Generation Transport 01, 02 (SIP-adus - Cabinet Office)
- Next Generation Transport 03 (SIP-adus - Cabinet Office / SIP-adus - National Police Agency)

[Human Factors]

- Human Factors 01 (SIP-adus - Cabinet Office)

[Impact Assessment]

- Impact Assessment 01 (SIP-adus - Ministry of Economy, Trade and Industry)

[Security]

- Security 01 (SIP-adus - Ministry of Economy, Trade and Industry)

[Field Operational Tests]

- Field Operational Tests 01 (SIP-adus - Ministry of Economy, Trade and Industry)
- Field Operational Tests 02 (SIP-adus - National Police Agency / National Police Agency)
- Field Operational Tests 03 (Ministry of Economy, Trade and Industry)



Breakout Workshop

■ Workshop Summary

- Share the issues and actions for future on the following six topics

■ Major Discussions

➤ Dynamic Map

- Discussed on handling of each layer data of dynamic map, feature data required for high definition map at global viewpoint, dynamic / semi-dynamic / semi-static data required for dynamic map

➤ Connected Vehicles

- Discussed on the themes such as activities of each region, sharing issues, deployment of infrastructure, future trend of communication method, use case, standardization, role sharing with dynamic map

➤ Security

- Discussed the status of international efforts of standardization, the necessity of examination in terms of both technical and process measures, and the measures when cyber attack was detected as a new issue

➤ Impact Assessment

- Discussed on the economic impact, urban planning, in addition to assessment framework of automated driving system for economic effect evaluation, traffic flow facilitation, traffic accident reduction

➤ Next Generation Transport

- Discussed the status of efforts for Tokyo Olympic Games/ Paralympic Games and accessible supporting systems for Pedestrians and disabled people

➤ Human Factors

- Discussed the issues on communication between an automated driving vehicle and surrounding traffic participants, the driver monitoring



SIP-adus Home Page

■ <http://en.sip-adus.jp/evt/workshop2016/>

HOME > Events & Conferences > List of Events > SIP-adus Workshop 2016

SIP-adus Workshop 2016

Event outline

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SIP-adus Workshop 2017

Save the date
See you at the same venue as 2016

- **Organizer** : Cross-Ministerial Strategic Innovation Promotion Program, Council for Science, Technology and Innovation, Cabinet Office, Government of Japan
- **Date** : **November 14-16, 2017**
- **Venue** : Tokyo International Exchange Center
http://www.jasso.go.jp/tiec/index_e.html
Tokyo Academic Park
2-2-1 Aomi, Koto-ku, Tokyo 135-8630 Japan



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