Report on SIP-adus Workshop 2018

Cross-Ministerial Strategic Innovation Promotion Program,
Council for Science, Technology and Innovation, Cabinet Office, Government of Japan

NEDO SIP Cabinet Office

1. Summary of SIP-adus Workshop 2018

◆ Objective

- Share information about common issues faced by the international community
- Present the status of SIP-adus research and development activities toward deployment of automated driving

◆ Results

- Many government officials and leaders of major projects participated in this international workshop on automated driving to share the latest information and hold technical discussion on key issues.
- The workshop has been organized as part of international cooperation activities, such as holding further discussions in Europe and the U.S., to achieve automated driving.

- Organizer: Cross-Ministerial Strategic Innovation Promotion Program, Council for Science, Technology and Innovation, Cabinet Office, Government of Japan
- Date: Tuesday, November 13 – Thursday, November 15, 2018
- Venue: Plaza Heisei, Tokyo International Exchange Center, Tokyo Academic Park, 2-2-1 Aomi, Koto-ku, Tokyo 135-8630, Japan
- Participants: 516 individuals from 17 countries (FY2017: 477 individuals from 16 countries)
- Speakers: 64 including 36 from overseas (FY2017: 59 including 35 from overseas)

2. Program

The sessions on November 13 and 14 featured presentations for general participants. The presentation materials were posted on the website on the day.

	Tuesday, November 13	Wednesday, November 14	Thursday, November 15 (Breakout Workshop)
AM	9:00~9:30 Opening Session	9:00~10:30 SIP-adus Report Session	9:00~12:00 Breakout Workshop (BW)
	9:30~13:00 Regional Activities & FOTs	10:45~12:25 Impact Assessment	
	Poster Session		
PM	14:00~15:30 Dynamic Map	14:00~16:15 Next Generation Transport	13:00~15:30 Breakout Workshop (BW)
	15:45~17:05 Connected Vehicles		16:00~17:00 Breakout Workshop Summary
	17:20~19:00 Cyber Security	16:30~18:00 Human Factors	17:00~17:30 Closing Session

Welcome speech by Noriyuki Koda, Vice-Minister for Policy Coordination

A poster session was held during the lunchbreak.

For the Breakout Workshops on November 15, experts from overseas were invited to participate in discussions with SIP-adus members and other Japanese experts.

3. 1. Opening Session

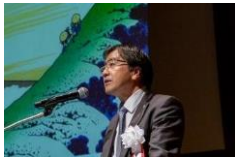
Welcome Speech

Noriyuki Koda: Vice-Minister for Policy Coordination, Cabinet Office, Japan
Efforts to promote public-private cooperation in Japan to implement automated driving

Keynote Speech

Kenneth M. Leonard: United States Department of Transportation, USA
Developments in automated driving in the U.S. focusing on technology development, research, and formulation of measures

Clara de la Torre: European Commission, Belgium
Three priority fields in the EU: legislation, research on social impacts, enhancement of EU's competitiveness



Seigo Kuzumaki: SIP-adus Program Director, Japan
Results of SIP-adus under the auspices of the Cabinet Office to lead international collaboration and cooperation

3. 2. Regional Activities and FOTs

➢Summary

- The environment for developing and implementing automated driving technology has rapidly improved in various ways.
- As the actual implementation of automated driving is taking shape, the priority of efforts has been shifting from developing technology to improving the environment such as assessing the effect of introduction, improving the system, and fostering social acceptance.
- Automated driving demonstration projects have been actively conducted in respective countries and regions because the introduction of automated driving is expected to have significant effects. Priority has been placed on building a systematic and sustainable framework of actual operation.
- Automated driving contributes to improving safety, reducing congestion, and offering means of mobility to individuals who have limited access to road transportation. It is also expected to help cope with the increasing demand for transportation and eliminate labor shortages attributed to population aging and population decline.
- The top priority is to ensure the safety of automated driving vehicles. International cooperation activities have been accelerated to establish consistent safety standards across the world and technologies to verify such standards.
- The automated driving levels defined by SAE have been well accepted as common standards for international discussion. It should be noted that automated driving technology does not simply advance from a lower level to a higher level; the technology varies depending on the vehicle type, service offered, and driving environment.

3. 2. Regional Activities and FOTs

- Moderator

Hajime Amano: ITS Japan, Japan

- Speakers

Masato Minakata: TOYOTA MOTOR CORPORATION, Japan
“SIP-adus Field Operational Test”
Efforts in SIP-adus FOT

Randell H. Iwasaki: CONTRA COSTA transportation authority, USA
“Redefining Mobility”
Efforts to develop automated driving at GoMentum Station in California

Jim Barbaresso: HNTB, USA
“HNTB AUTOMATED VEHICLE PROGRAMS: From Planning to Deployment”
Efforts to develop automated driving in the U.S.

Habib Shamskhou: Advanced Mobility Group, USA
“Shared Autonomous Vehicle (SAV) Program Progress Report”
Efforts to develop shared mobility in the U.S.

3. 2. Regional Activities and FOTs

Yoshihiro Suda: The University of Tokyo, Japan
“Toward establishment of ecosystem of mobility innovation by automated driving —Challenge for collaboration”
Efforts in Japan to establish the ecosystem for mobility innovation by automated driving

Thomas Form: Volkswagen AG, Germany
“PEGASUS Method for Assessment of Highly Automated Driving Function”
Introduction of the German PEGASUS method for assessment of a highly automated driving system

Aria Etemad: Volkswagen Group Research, Germany
“Piloting Automated Driving on European Roads”
Efforts in L3Pilot in Germany

Tom Alkim: Ministry of Infrastructure & Water Management, The Netherlands
“Smart Mobility, Dutch Reality CAD in the NL”
Efforts to develop automated driving in the Netherlands

Daniel Ruiz: Meridian Mobility, UK
“CAV Development and Deployment in the UK”
Efforts to develop automated driving in the U.K.

3. 2. Regional Activities and FOTs

Alina Koskela: Finnish Transport Safety Agency (Trafi), Finland
“Regional activities and FOTs: Connected and automated driving trials in Finland”
Efforts to develop automated driving in Finland

Jan Hellaker: Drive Sweden, Sweden
“Update from Sweden”
Efforts to develop automated driving in Sweden

Keqiang Li: Tsinghua University, China
“The Base Platform of ICV System and Its Industrialization Approach”
Efforts to develop automated driving in China

Takashi Oguchi: The University of Tokyo, Japan
“How to introduce CAV? What kind of CAV? to be accepted in the Society”
Issues in Japan for introducing automated driving

3. 3. Dynamic Map

➢Summary

- Stakeholders have been actively working on international activities to standardize high-definition digital maps and define and systematize the component functions.
- ISO and OADF (Open Auto Drive Forum) are contributing to promoting international cooperation activities. SIP-adus also plays a key role.
- The main issue in the future is to maintain and update the high-definition map database and integrate the database with dynamic information including traffic information, road blockage information, weather information, and real-time information for safety.
- SIP-adus created high-definition digital road maps for a large-scale FOT with the total length of over 700 km and distributed them to the FOT participants for assessment. To achieve integration with cooperative services currently in operation, SIP-adus also distributed equipment for receiving dynamic information to FOT participants for assessment with participants from overseas.

3. 3. Dynamic Map

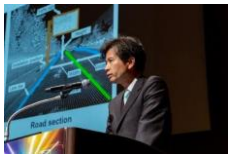
Moderator

Satoru Nakajo: The University of Tokyo, Japan
“Session Overview”
Status of dynamic map development and activities toward standardization in Japan, to provide an overview of the session

Speakers

Yoshiaki Tsuda: Mitsubishi Electric Corporation, Japan
“Status report of Dynamic Map Field Operational Tests”
Status and results of the large-scale dynamic map FOT

Tsutomu Nakajima: Dynamic Map Platform Co., Ltd., Japan
“Developments to Date and Future Plans at Dynamic Map Platform”
Status of developing high-definition 3D map data at Dynamic Map Platform Co., Ltd.



Katsuya Abe: Ministry of Land, Infrastructure, Transport and Tourism, Japan
“Road administrators’ perspectives”
Dynamic maps from road administrators’ perspectives

3. 3. Dynamic Map

Jean-Charles Pandazis: ERTICO, Belgium
“ERTICO platforms: focus on ADASIS and TN-ITS”
ERTICO’s platform focused on ADASIS and TN-ITS

Prokop Jehlicka: OADF/SENSORIS, Germany
“OADF – An Introduction”
Activities by OADF (NDS, ADASIS, SENSORIS, TISA, SIP-adus)

Andras Csepinszky: TISA, Hungary
“OADF – work in progress”
Status of activities by the three task forces (Architecture TF, Live Map Delivery Chain TF, Highly Reliable Maps TF) at OADF

3. 4. Connected Vehicle

➢Summary

- Wireless communication-based cooperative systems are expected to be utilized in various applications such as preventing accidents that must be handled urgently, providing information to monitor the status, and updating maps and software.
- The functionality, performance, and specifications required of wireless communication vary depending on the applications. There is a consensus that the implementation will require the combination of multiple communication technologies. However, the conditions such as the frequency allocation, transition from existing technology to next-generation technology, and market penetration vary in respective countries and regions.
- Both Europe and the U.S. are in the demonstration phase for cooperative services before implementation. The cooperative services will be utilized in automated driving in the next step. In Europe and the U.S., efforts have been made for many years to develop and implement DSRC-based cooperative systems. The focus of discussion is how to ensure harmony with fifth-generation (5G) mobile communication.
- SIP-adus utilizes cooperative services derived from various communication technologies, which have a track record of many years in operation, in its large-scale FOT.

3. 4. Connected Vehicle

Moderator

Alvaro Arrue: Applus IDIADA, Spain

Speakers

Kevin Dopart: United States Department of Transportation, USA
“Connected and Automated Vehicle Activities in the United States”
Overview of Automated Vehicles 3.0 guidelines, progress status of CV Pilot which is underway in NY, WY, and Tampa, and progress status of cooperative automated driving (CARMA)

John Kenney: Toyota InfoTechnology Center, USA
“An Update on V2X in the United States”
Progress status of the 5.9 GHz band DSRC-based V2X in the U.S. and the status of frequency allocation for DSRC, Cellular-V2X, and Wi-Fi

3. 4. Connected Vehicle

Christian Rousseau: RENAULT, France
“OVERVIEW ON C-ITS”
Progress in SCOOP, a project in the EU, and C-Roads platform, a framework in the EU, and the policy, laws, and regulations toward commercial deployment of C-ITS

Maxime Flament: 5GAA, Belgium
“Path towards 5G for Automated Driving”
Overview of 5G communication technology, measures to achieve high reliability and low latency of 5G communication technology in automotive applications, and overview of Cellular-V2X technology

Norifumi Ogawa: Mazda Motor Corporation, Japan
“SIP-adus Phase 1 Activities’ Summary and Phase 2 Activities’ Plan”
Results of Phase 1 to verify feasibility of the V2X application based on the existing ITS communication and FOT plan for Phase 2 to introduce communication infrastructure to the Tokyo Waterfront City area

3. 5. Cyber Security

➢Summary

- Cyber security standards have been drafted by UNECE WP29/GRVA.
- Rapidly increasing dependence on electronic control and software has been changing the product development process significantly. As a result, cyber security risks have been growing.
- SIP-adus has conducted risk analysis and vulnerability tests taking into account the architecture of automotive control systems. It will create design guidelines for security.
- Increased automotive connectivity through communication has expanded the attack surface (intrusion paths for cyberattacks) and is likely to increase vulnerability.
- It is effective to prepare methodologies to analyze the potential risks of cyberattacks and reduce the risks based on the database of accumulated cases. To minimize damage and prevent proliferation, it is also important to share information about attacks.

3. 5. Cyber Security

Moderator

Takashi Imai: Toyota InfoTechnology Center Co., Ltd., Japan
“Progress to the Automated and Connected Vehicle and Trends in Vehicle Cybersecurity”
Progress in automated driving and trend of automotive cyber security

Speakers

Shigeyuki Kawana: TOYOTA MOTOR CORPORATION, Japan
“Trend of Cybersecurity Regulation”
Developments to enact laws and regulations and establish standards for cyber security in the auto industry

Chris Clark: Synopsys Inc., USA
“Drive Security From The Inside Out”
Electronic architecture and security of in-vehicle systems

Hiroshi Nodomi: PwC Consulting LLC, Japan
“Current SIP-adus Activity for Vehicle-level Penetration Testing”
SIP-adus activities: threat analysis and formulation of evaluation guidelines for penetration testing

3. 5. Cyber Security

Laszlo Toth: Deloitte's Cyber Risk Services, Hungary
"Automotive Fleet SIEM"
Automotive SIEM as a prerequisite for product security of connected cars
(Security Information System + Security Event Management)

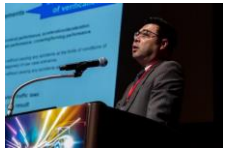
Paul Wooderson: HORIBA MIRA Ltd., UK
"Cybersecurity Engineering and Assurance for CAV"
Cyber security and assurance for connected and automated vehicles

Tsutomu Matsumoto: Yokohama National University, Japan
"Automotive Cyber-Physical Security Testbeds and Applications"
Efforts in academia for automotive security testbeds that help foster white-hat hackers

3. 6. SIP-adus Report Session

Koji Hachiyama: Cabinet Secretariat, Japan
“ITS Development Policies in Japan”
Report on ITS development policies in Japan

Yasuyuki Koga: Cabinet Office, Japan
“SIP-adus National R&D Project for Connected and Automated Driving in Japan”
R&D on automated driving in Japan



Takahiro Hirasawa: Ministry of Land, Infrastructure,Transport and Tourism, Japan
“Efforts of Road Transport Bureau, MLIT For Automated Driving”
Report on efforts made by the Road Transport Bureau, MLIT to promote automated driving

Katsuya Abe: Ministry of Land, Infrastructure,Transport and Tourism, Japan
“Road administrators’ view for realizing automated driving systems By 2020”
Report from road administrators’ view for realizing automated driving by 2020

3. 6. SIP-adus Report Session

Toshihiro Sugi: National Police Agency, Japan
“NPA Initiative Regarding Automated Driving”
Report on efforts made by NPA regarding automated driving

Yosuke Nishimuro: Ministry of Internal Affairs and Communications, Japan
“To realize Connected Vehicle Society”
Efforts made by MIC toward social implementation of automated driving

Akihiro Masuda: Ministry of Economy, Trade and Industry, Japan
“METI’s Automated driving Demo”
METI’s efforts on automated driving FOTs

3. 7. Impact Assessment

➢Summary

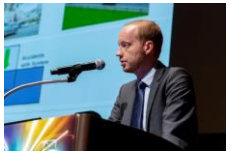
- A multi-agent simulation for modeling automated driving systems, drivers, traffic environment, and road users around the vehicles is effective for assessing the effect in terms of safety.
- The data derived from large-scale FOTs such as EuroFOT, AdaptIVe, and L3Pilot is an important source of information for use in simulations.
- The operational design domain (ODD) is not necessarily a closed route or area. There are situations where automated driving can no longer continue due to the performance limit of automated driving vehicles, traffic status, and human factors, in particular, causing disruptions to smooth traffic. To minimize such problems, it is necessary to improve the physical and electronic infrastructure.
- Advanced driver assistance and automated driving systems offer the benefit of preventing accidents of both the vehicles equipped with such systems and other nearby vehicles without such systems. It is in the public interest to offer incentives to spread such technologies.

3. 7. Impact Assessment

➢ Moderator

Koichi Sakai: The University of Tokyo, Japan

➢ Speakers



Felix Fahrenkrog: BMW, Germany

“IMPACT ASSESSMENT FOR AUTOMATED DRIVING”

Status of implementation of projects related to assessing the impact of automated driving on traffic safety in Europe

Nobuyuki Uchida: Japan Automobile Research Institute, Japan

“A Multi-agent Traffic Simulation to Predict the Impact of Automated Driving Systems on Safety”

Multi-agent traffic simulation by SIP-adus to estimate the accident reduction effect of automated driving

Adrian Zlocki: FKA, Germany

“A Traffic-based Method for Safety Impact Assessment of Road Vehicle Automation”

Traffic-based method for safety impact assessment of automated driving and verification of the safety impact in the L3Pilot project in Europe

3. 7. Impact Assessment

Bart van Arem: Delft University of Technology, The Netherlands
“Spatial Impact of Automated Driving”
Value of travel time in private vehicles and impact of space utilization by introducing automated driving

Hiroaki Miyoshi: Doshisya University, Japan
“Economic Analysis of Automated Driving Systems”
Economic aspects of automated driving systems, benefits from mandatory installation, and comparison of impact assessment indexes of the auto industry on domestic industries in Japan, U.S., and Germany

Jaap Vreeswijk: MAP Traffic Management, The Netherlands
“Assessment of automated driving to design infrastructure-assisted driving at transition areas”
Assessment of automated driving to design driver assistance for offering information from the roadside infrastructure at transition areas

3. 8. Next Generation Transport

➢Summary

- Many FOTs are underway on low-speed shuttles (first/last one mile). However, more reviews must be conducted on traffic issues to be resolved, economic viability of service operation, and system improvement.
- In Singapore, phased introduction, from FOTs and trial operation to full deployment, is being promoted systematically based on the grand design for urban and residential areas. This process is expected to foster social acceptance and promote improvement of the system.
- Governments and industries have been working on truck platooning to improve safety and efficiency, cut costs, and cope with labor shortages.
- The ENSEMBLE project in Europe aims to attain implementation across the logistics industry by integrating the operation system for platooning of multi-brand trucks and transportation service layers.

3. 8. Next Generation Transport

Moderator

Masayuki Kawamoto: University of Tsukuba, Japan
“Low Speed AD Shuttle in Limited ODD and Mobility as a Service”
Low-speed automated driving shuttle in limited ODD and MaaS

Speakers

Nadege Faul: VEDECOM, France
“New Mobility Services Challenges and Developments”
Challenges and development of new automated driving services in Europe

Adriano Alessandrini: University of Florence, Italy
“New transport services enabled by automation to revolutionize mobility or What can be done today after CityMobil2”
Current situation of automated driving services after the CityMobil2 project

Elizabeth Machek: United States Department of Transportation, USA
“Automated Low-Speed Shuttles: State of Practice”
Current situation of automated low-speed shuttle services deployed by USDOT in different parts of the U.S.

3. 8. Next Generation Transport

Kian Keong Chin: Land Transport Authority, Singapore
“Singapore’s Roadmap on Autonomous”
Singapore’s roadmap to commercially deploy automated driving and efforts to deploy “fixed route and scheduled bus services” and “shuttles for shared, on-demand services” as public transport

Sadahiro Kawahara: JTEKT CORPORATION, Japan
“Development of precise docking system contributing to Next Generation Transportation in SIP”
Development of a precise docking control system for next-generation urban transport in SIP-adus

Hidehiko Enomoto: Hino Motors, Ltd., Japan
“Automated Driving of Trucks in Japan”
Platooning of multi-brand trucks based on cooperative ACC in Japan

Steven Shladover: California PATH, USA
“Truck Automation in the US”
Platooning of trucks and automated low-speed urban goods delivery vehicles in the U.S.

Maurice Kwakkernaat: TNO, The Netherlands
“Enabling Safe Multi-Brand Platooning for Europe”
Multi-brand truck platooning in Europe (ENSEMBLE project)

3. 9. Human Factors

➢Summary

- In the first SIP-adus Workshop, the research targets were categorized into three themes: 1) offering information to drivers, 2) transition from the system to the driver, and 3) communication with other road users. Substantial results were produced.
- Users of vehicles equipped with the advanced driver assistance and automated driving functions are expected to understand the system functions, operation conditions, and performance limits properly.
- The time required for transition from a takeover request from the system to the driver depends largely on the activity in which the driver is engaged. It is necessary to conduct further analyses on the driver's behavior in automated driving.
- Communication between the driver and other road users is becoming increasingly important. Behavioral analysis of such communication was conducted, and results were obtained in the initial phase. In-depth research needs to be conducted.
- Knowledge has been accumulated regarding the operability and display visibility in ordinary vehicles. However, such knowledge has not been fully utilized, and safety issues have emerged. It is necessary to consider basic issues as well.

3. 9. Human Factors

➢ Moderator

Satoshi Kitazaki: AIST, Japan

➢ Speakers

Klaus Bengler: Technical University of Munich, Germany
“Communication and Interaction between Automated Vehicles and other Road Users”
Communication and interaction between automated driving vehicles and other traffic participants

Peter Burns: Transport Canada, Canada
“Human Factors: Unknowns, Knowns and the Forgotten”
Toolkit for safety assessment of automated driving vehicles of Level 3 or higher and assessment methods in Canada

C.Y. David Yang: AAA Foundation for Traffic Safety, USA
“What Have We Found? What’s Next?”
Key points to note when introducing new technologies based on research by AAA Foundation

Michiaki Sekine: National Traffic Safety and Environment Laboratory, Japan
“Issues related to human factors in international regulation activity of automated driving technologies”
Issues related to human factors in formulating international standards for automated driving technologies

Satoshi Kitazaki: AIST, Japan
“What Have We Found? What’s Next?”
SIP-adus’ efforts in three human factors and future issues

4. 1. Regional Activities and FOTs (Breakout Workshop)

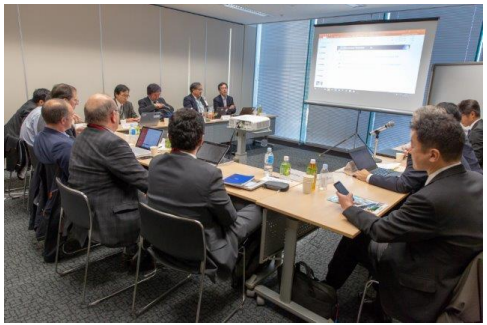
- Objective of the Breakout Workshop
  - To classify automated driving vehicles and discuss issues toward achieving Level 4 automated driving vehicles
- Main points of discussion
  - Automated driving levels related to various means of transportation including shuttles, trucks, transportation, and personal mobility
  - Sharing issues through FOTs
  - Deployability and commercialization of Level 3/Level 4 automated driving vehicles
  - Clarification of terms such as research, pilot, deployment, demonstration, and FOT
- Future actions
  - Discussion of successful solutions for implementation depending on the vehicle classification, identification of issues, and definition of efforts to solve issues
  - Review of actions to be taken depending on the services to be offered, ODD, and environment
  - Further discussions to be held in Belgium in April 2019

4. 2. Dynamic Map (Breakout Workshop)

- Objective of the Breakout Workshop
  - To share information about the results of large-scale FOTs and the future vision of Japan with Europe and the U.S.
  - To reflect the results of SIP-adus in the industry standards
- Main points of discussion
  - Introduction of the results of large-scale FOTs (flash reports) and dynamic map business by DMP
  - Possible measures to ensure consistency with ISO and industry standards including NDS, TISA, and SENSORIS
- Future actions
  - Continue discussions for information sharing and cooperation through the OADF and other organizations

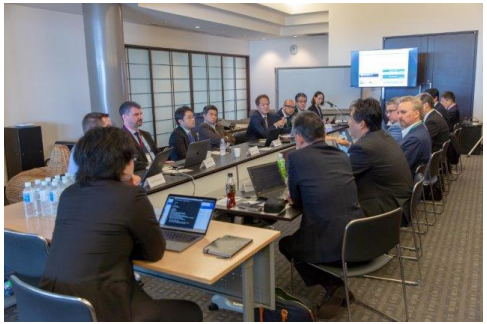
4. 3. Connected Vehicle (Breakout Workshop)

- Objective of the Breakout Workshop
  - To gain a mutual understanding of the status of implementation and diffusion in respective regions
  - To share issues related to the application of connectivity by DSRC and 5G to automated driving
- Main points of discussion
  - Sharing of information about the status of implementation and diffusion of connectivity in respective regions
  - Exchange of opinions about the application of connectivity by DSRC and 5G to automated driving
- Future actions
  - Continue information-sharing across the regions



4. 4. Cyber Security (Breakout Workshop)

- Objective of the Breakout Workshop
  - To determine the vision of international cooperation activities through discussions on main themes from the viewpoint of industry, government, and academia including the auto industry and security vendors
- Main points of discussion
  - Efforts on automotive cyber security in the following three fields toward legislation in 2020:
    - Auto industry
    - IT industry
    - Academia
- Future actions
  - Continue discussions toward legislation in 2020



4. 5. Impact Assessment (Breakout Workshop)

- Objective of the Breakout Workshop
  - To embody cooperation and collaboration with Europe and the U.S. regarding impact assessment methods in terms of reduction of traffic accidents and CO_2 emissions, and socioeconomic impact in Japan
- Main points of discussion
  - Status of efforts and issues in respective regions regarding impact assessment of automated driving, focusing on quantitative evaluation methods in particular
  - Shared understanding of the importance of virtual assessment technologies and assessment tools such as simulation
- Future actions
  - Continue to promote communication between stakeholders through international conferences

4. 6. Next Generation Transport (Breakout Workshop)

- Objective of the Breakout Workshop
  - To discuss applications of automated driving that benefit citizens' lives
- Main points of discussion
  - Utilization of existing infrastructure and construction of new infrastructure to promote social implementation
  - Construction of a single ecosystem in which the elements such as vehicles, services, infrastructure, social demand/acceptance, and business models are balanced
- Future actions
  - Build and maintain the network for cooperation on international research beyond the milestones in national projects

4. 7. Human Factor (Breakout Workshop)

- Objective of the Breakout Workshop
  - To verify the issues chosen for SIP-adus Phase 2

- Main points of discussion
  - Focusing on “What have we found? What’s next?”
  - Identification and prioritization of human factor issues for the next five years

- Future actions
  - Apply the results of the workshop to setting themes in human factor research of SIP-adus Phase 2

4. 8. Breakout Workshop Summary

- After the Breakout Workshop, leaders of respective themes reported the summary to share with all the participants.

Regional Activities and FOTs:
Takashi Oguchi

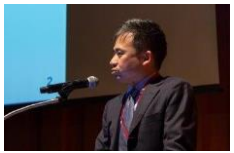
Next Generation Transport:
Masayuki Kawamoto

Dynamic Map:
Satoru Nakajo

Human Factors:
Satoshi Kitazaki

Connected Vehicle:
Norifumi Ogawa

Summary of Workshop:
Hajime Amano



Cyber Security:
Takashi Imai

Impact Assessment:
Nobuyuki Uchida

4. 9. Closing Session

- Expressed appreciation for participation in the SIP-adus Workshop 2018 and promoted communication among all the participants

Closing Speech
Yasuyuki Koga: Cabinet Office, Japan

Closing Speech
Yoichi Sugimoto: SIP-adus Sub Program Director, Japan

Presentation of a plaque of appreciation to presenters from overseas
Seigo Kuzumaki: SIP-adus Program Director, Japan

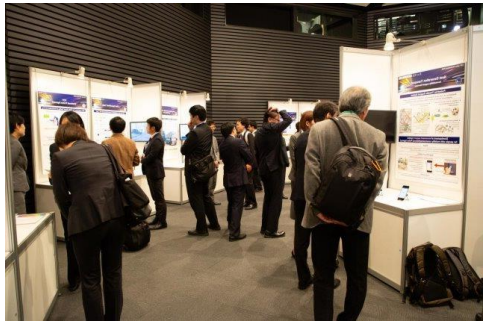
Presentation of a plaque of appreciation to presenters from overseas
Takahiko Uchimura: Workshop Program Organizer, Japan

Closing with *ipponjime* ceremonial hand-clapping
Hajime Amano: ITS Japan, Japan

5. SIP-adus Exhibition

- Posters were exhibited in a hall adjacent to the conference hall.
- Poster sessions were held during the lunchbreak.
- Exhibited posters are put on the website.

Visitors	AM	PM	Poster session	Total
Nov. 13	70	34	174	278
Nov. 14	52	57	149	258



Exhibition panel

[Overview]
- Overview 01 (Cabinet Secretariat)
- Overview 02 (Cabinet Secretariat)
- Overview 03 (Ministry of Land, Infrastructure, Transport and Tourism)
- Overview 04 (SIP-adus / Cabinet Office)
- Overview 05 (SIP-adus / Cabinet Office)
- Overview 06 (SIP-adus / Cabinet Office)

[Dynamic Map]
- Dynamic Map 01 (SIP-adus / Cabinet Office - NEDO)
- Dynamic Map 02 (SIP-adus / National Police Agency)

[Connected Vehicles]
- Connected Vehicles 01 (SIP-adus / National Police Agency)
- Connected Vehicles 02 (SIP-adus / Ministry of Internal Affairs and Communications)

[Human Factors]
- Human Factors 01 (SIP-adus / Cabinet Office - NEDO)
- Human Factors 02 (SIP-adus / Cabinet Office - NEDO)

[Cyber Security]
- Cyber Security 01 (SIP-adus / Cabinet Office - NEDO)

[Impact Assessment]
- Impact Assessment 01 (SIP-adus / Cabinet Office - NEDO)
- Impact Assessment 02 (SIP-adus / Cabinet Office - Ministry of Internal Affairs and Communications - NEDO)
- Impact Assessment 03 (SIP-adus / Ministry of Economy, Trade and Industry)
- Impact Assessment 04 (SIP-adus / Ministry of Economy, Trade and Industry)

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

[Field Operational Tests]
- Field Operational Tests 01 (National Police Agency)
- Field Operational Tests 02 (SIP-adus / Cabinet Office - NEDO)
- Field Operational Tests 03 (SIP-adus / Cabinet Office)
- Field Operational Tests 04 (SIP-adus / Ministry of Land, Infrastructure, Transport and Tourism)
- Field Operational Tests 05 (Ministry of Economy, Trade and Industry)
- Field Operational Tests 06 (Ministry of Economy, Trade and Industry)

[The 2nd Phase of SIP-adus]
- The 2nd Phase of SIP-adus 01 (SIP-adus / Cabinet Office)
- The 2nd Phase of SIP-adus 02 (Ministry of Economy, Trade and Industry)
- The 2nd Phase of SIP-adus 03 (Ministry of Economy, Trade and Industry)
- The 2nd Phase of SIP-adus 04 (SIP-adus / Cabinet Office - NEDO)

6th SIP-adus Workshop

Date: November 12–14, 2019

Venue: Tokyo International Exchange Center


SIP-adus
Workshop
2018
Thank you