

“Business investigation into the strengthening of information transmission capabilities in preparation for the realization of automated driving systems” in “Strategic Innovation Promotion Program (SIP) Phase 2/ Practical Implementation of Automated Driving (Systems and Services)”

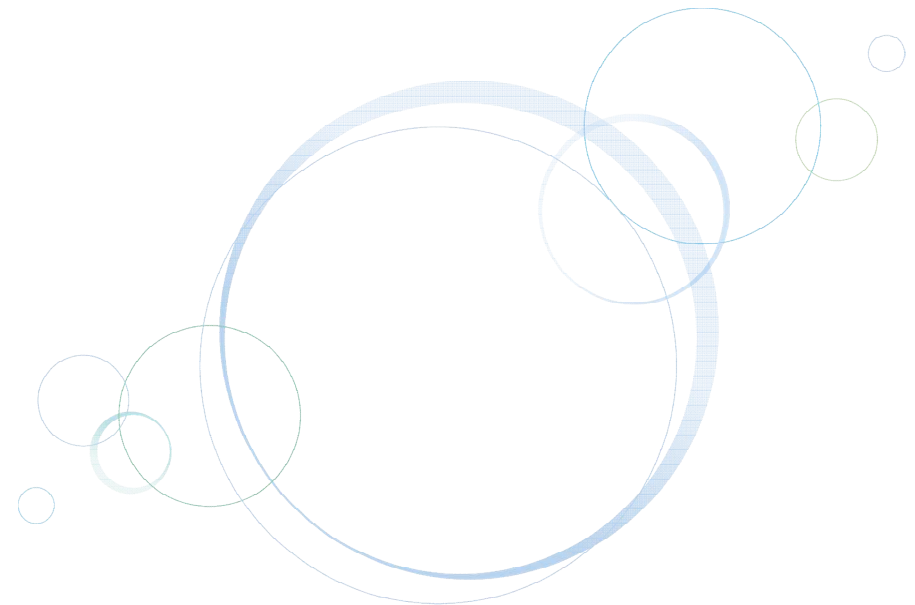
Report

Overview Edition

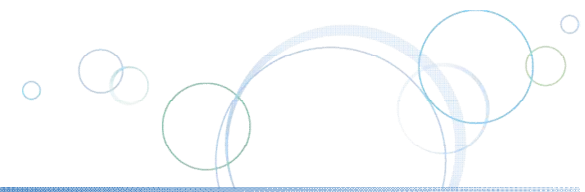
March 20, 2019

Contents

1. Investigation Policy.....	3
2. Hosting of SIP-adus Workshop2018.....	4
(1) Overview of event.....	4
a. Results.....	4
b. Session.....	5
c. Breakout Workshop.....	6
d. Poster session.....	7
e. Creation of digital content.....	9
(2) Verification of results.....	10
3. Transmitting information using the website...	17
(1) Overview of information transmission.....	17
(2) Verification of results.....	19
4. Final thoughts.....	21



1. Investigation Policy



Purpose of the investigation: Strengthening “information transmission capabilities” in preparation for practical implementations of automated driving

Practical implementations of automated driving

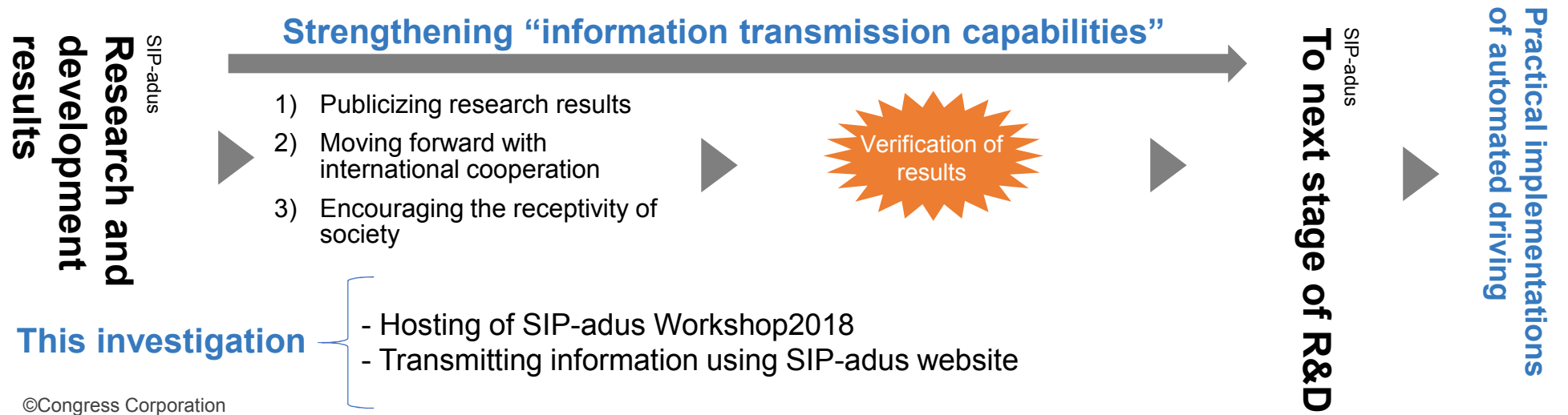
In 2014 the Cabinet Office established the Strategic Innovation Promotion Program (SIP) / Automated Driving System Program, to promote the development of advanced automated driving systems and practical implementations of next-generation public transport systems, with the aim of reducing traffic accidents and congestion, and achieving greater convenience. In Phase 2, which begins ahead of schedule this fiscal year, we aim to establish core technology in the area in which we are collaborating with automotive manufacturers (such technology gathering and distributing traffic information), build the foundations for realizing Level 3 automated driving on normal roads (the system performs all acceleration, steering and braking operations, but the driver responds when requested by the system), and create practical implementations.

Strengthening “information transmission capabilities”

In order to deliver practical implementations of the Level 3 automated driving that is the goal of SIP Phase 2/automated driving, it will be important to strengthen our information transmission capabilities, and to utilize the opinions and responses received to drive the next stage of research and development. This investigation will 1) Promote research and development under the proactive dissemination of the results. 2) Move forward with international cooperation, working to share information among experts in order to improve the competitive position of Japan in those fields. 3) Obtain the understanding of the people and encourage social receptivity towards automated driving technology and systems. By promoting the transmission of such information, and verifying and analyzing the results thus obtained, our goal is to promote future research and development and to guide its direction.

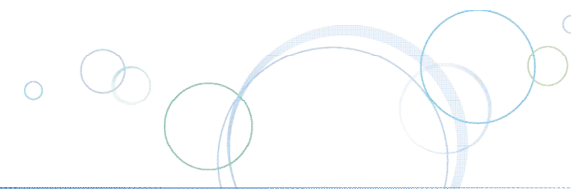
Investigation policy: Using SIP-adus Workshop2018 and its website to strengthen information transmission

In this investigation, we worked to strengthen the transmission of information regarding automated driving by holding “SIP-adus Workshop2018,” the fifth such event, thus facilitating the transmission from Japan by both domestic and overseas experts of international developments in automated driving, and by using the SIP-adus website to publicize research and development results, as well as event information aimed at encouraging the receptivity of society to automated driving. In addition, in order to contribute to the promotion of subsequent research and development, we verified the results that had been obtained.



2. Hosting of SIP-adus Workshop2018

(1)a. Overview of event and results



Results gained by hosting SIP-adus Workshop2018

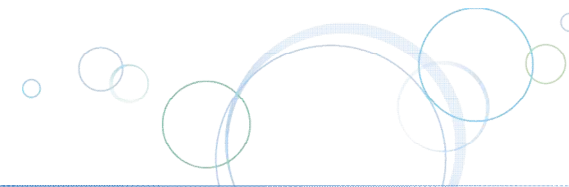
- ✓ As a significant international conference on automated driving, the event was attended by a number of leaders from various governments and major projects, resulting in the sharing of the most recent information, and specialist discussions related to initiatives on important issues etc.
- ✓ We have established the event as a part of the international cooperative activities being undertaken to implement automated driving, such as the extension of continuing discussions in Europe and the US.

Overview of event

Overview of SIP-adus Workshop2018																													
Sponsor	Cross-Ministerial Strategic Innovation Promotion Program, Council for Science, Technology and Innovation, Cabinet Office, Government of Japan																												
Period	November 13-15 (Tuesday - Thursday) 2018																												
Venue	Tokyo International Exchange Center, Plaza Heisei (2-2-1 Aomi, Koto-ku, Tokyo) (http://www.jasso.go.jp/tiec/index_e.html)																												
Participants	516 individuals from 17 countries (FY2017: 477 individuals from 16 countries)																												
Speakers	64, including 36 speakers from overseas (FY2017: 59, including 35 speakers from overseas)																												
Themes	<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>Regional Activities and FOTs</p> <p>Dynamic Map</p> <p>Connected Vehicles</p> <p>Cyber Security</p> <p>Impact Assessment</p> <p>Next Generation Transport</p> <p>Human Factors</p> </div> <div style="flex: 2; text-align: center;"> <table border="1"> <thead> <tr> <th></th> <th>November 13 (Tuesday)</th> <th>November 14 (Wednesday)</th> <th>November 15 (Thursday) <small>(SIP-adus Member Subcommittee)</small></th> </tr> </thead> <tbody> <tr> <td>AM</td> <td>9:00~9:30 Opening Session</td> <td>9:00~10:30 SIP-adus Report Session</td> <td>9:00~12:00 Breakout Workshop (BW)</td> </tr> <tr> <td></td> <td>9:30~13:00 Regional Activities & FOTs</td> <td>10:45~12:25 Impact Assessment</td> <td></td> </tr> <tr> <td></td> <td colspan="3">Poster Session</td> </tr> <tr> <td>PM</td> <td>14:00~15:30 Dynamic Map</td> <td>14:00~16:15 Next Generation Transport</td> <td>13:00~15:30 Breakout Workshop (BW)</td> </tr> <tr> <td></td> <td>15:45~17:05 Connected Vehicles</td> <td></td> <td>16:00~17:00 Breakout Workshop Summary</td> </tr> <tr> <td></td> <td>17:20~19:00 Cyber Security</td> <td>16:30~18:00 Human Factors</td> <td>17:00~17:30 Closing Session</td> </tr> </tbody> </table> </div> </div>		November 13 (Tuesday)	November 14 (Wednesday)	November 15 (Thursday) <small>(SIP-adus Member Subcommittee)</small>	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
	November 13 (Tuesday)	November 14 (Wednesday)	November 15 (Thursday) <small>(SIP-adus Member Subcommittee)</small>																										
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																										
Official website	http://www.sip-adus.go.jp/evt/workshop2018/																												
Main features	Numerous speakers from overseas, breakout workshop sessions for discussion among experts from both Japan and overseas, poster session publicizing results achieved																												
Survey	Respondents: 244/460 (totals for BW participants/general participants); response rate: 53%																												
Media attending	Six companies (FOURIN, Inc., SHIN-NORINSHA CO.,LTD, KK Butsuryu Sangyo Shimbun-sha, The Dempa Times, Nikkei Automotive, Nikkei xTech, International Press Network)																												

2. Hosting of SIP-adus Workshop2018

(1)b. Overview of event and results - sessions



Session results

- ✓ On the first (November 13) and second (November 14) days of the event, 64 experts (including 36 from overseas) held lecture sessions for general participants.
- ✓ The lectures and meetings were all conducted in English, and focused on disseminating and sharing the results of Japan's automated driving research with an international audience (simultaneous interpreting was available).
- ✓ In addition to the seven themes, related governmental agencies gave reports on the results of SIP-adus policies. The welcome speech was given by Noriyuki Koda, Vice-Minister for Policy Coordination.
- ✓ Kenneth M. Leonard from the US Department of Transportation, and Clara de la Torre from the European Commission, also acted as keynote speakers.
- ✓ The research papers used by all of the speakers were made available on the official website with immediate effect, allowing them to be disseminated widely.

Session overview

(Units: people)

Session name	Date held	Time	Domain leader	Moderator	No. of speakers	Of which overseas	Of which Japan
Opening	13th	9:00-9:30	—	—	4	2	2
Regional Activities and FOTs	13th	9:30-13:00	Takahiko Uchimura	Hajime Amano	14	10	4
Dynamic Map	13th	14:00-15:30	Satoru Nakajo	Satoru Nakajo	6	3	3
Connected Vehicles	13th	15:45-17:05	Norifumi Ogawa	Alvaro Arrue	6	5	1
Cyber Security	13th	17:20-19:00	Takashi Imai	Takashi Imai	7	3	4
SIP-adus Report Session	14th	9:00-10:30	—	—	7	0	7
Impact Assessment	14th	10:45-12:25	Nobuyuki Uchida	Koichi Sakai	7	4	3
Next Generation Transport	14th	14:00-16:15	Masayuki Kawamoto	Masayuki Kawamoto	8	6	2
Human Factors	14th	16:30-18:00	Satoshi Kitazaki	Satoshi Kitazaki	5	3	2
Total					64	36	28



2. Hosting of SIP-adus Workshop2018

(1)c. Overview of event and results - breakout workshops

Breakout workshop results

- ✓ On the third day of the event (November 15), discussions hosted mostly by SIP-adus members were held on seven separate session themes, with experts from both Japan and overseas invited to contribute.
- ✓ The discussions were held entirely in English, without interpretation provided. Japanese attendees also participated actively in discussions, leading to further strengthening of their networks.
- ✓ By not making the content of the discussions public, the focus was on cutting-edge ideas and on encouraging attendees to speak freely.

Overview of breakout workshops

(Units: people)

Session name	Domain leader	Aims of breakout workshop	No. of Participants	Of which overseas	Of which Japan
Regional Activities and FOTs	Takahiko Uchimura	To classify automated driving vehicles and discuss issues toward achieving Level 4 automated driving vehicles	25	12	13
Dynamic Map	Satoru Nakajo	<ul style="list-style-type: none"> - 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 	24	6	18
Connected Vehicles	Norifumi Ogawa	<ul style="list-style-type: none"> -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 	14	5	9
Cyber Security	Takashi Imai	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	16	4	12
Impact Assessment	Nobuyuki Uchida	To embody cooperation and collaboration with Europe and the U.S. regarding impact assessment methods in terms of reduction of traffic accidents and CO2 emissions, and socioeconomic impact in Japan	13	6	7
Next Generation Transport	Nobuyuki Uchida	To discuss applications of automated driving that benefit citizens' lives	22	6	16
Human Factors	Satoshi Kitazaki	To verify the issues chosen for SIP-adus Phase 2	19	7	12

2. Hosting of SIP-adus Workshop2018

(1)d. Overview of event and results - research poster session

Results of poster session

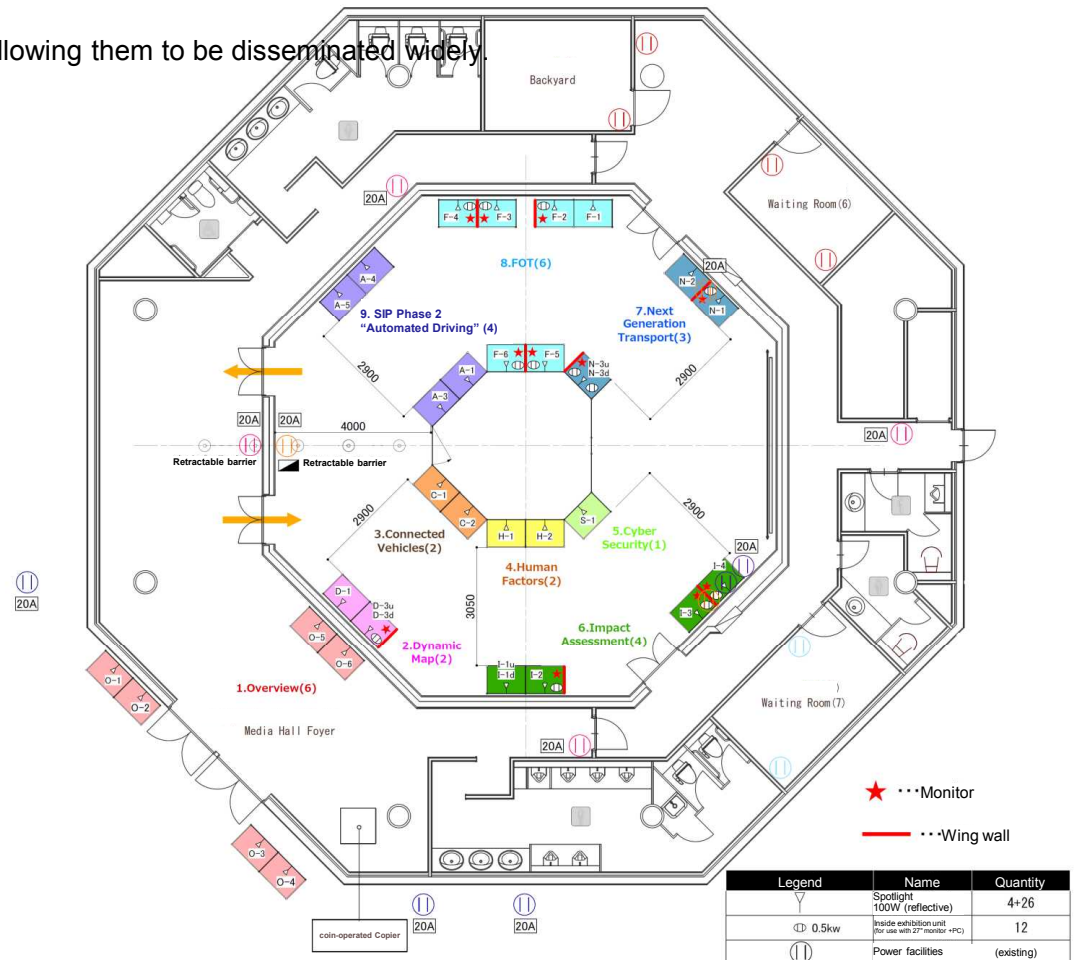
- ✓ On the first (November 13) and second (November 14) days of the event, a poster session arranged by theme was held in the media hall on the second floor of the venue, to present the results of research and development.
- ✓ 278 visitors attended on November 13, and 258 on November 14, a total increase of 93 over the number of viewers recorded in the previous year.
- ✓ In addition to the panels, there was an area for video footage, with representatives from various governmental agencies on hand to provide explanations, allowing lively exchanges of views with the attendees.
- ✓ In a departure from the previous year, the media hall on the same floor as the lecture venue was used, with the lunch break used for the poster session, and attendees invited from the lecture venue to the media hall. We believe that the various measures we took, such as broadcasting lectures live to the media hall, were effective in raising the number of visitors.
- ✓ All of the poster images were made available on the official website, allowing them to be disseminated widely.

Overview of poster session

No. of visitors to poster session (Units: people)

Date of visit	2018	2017	% YoY
First day	278	286	-8
Second day	258	157	+101
Grand total	536	443	+93

Themes	No. of posters
1. Overview	6
2. Dynamic Map	2
3. Connected Vehicles	2
4. Human Factors	2
5. Cyber Security	1
6. Impact Assessment	4
7. Next Generation Transport	3
8. Regional Activities and FOTs	6
9. SIP Phase 2 "automated driving"	4



2. Hosting of SIP-adus Workshop2018

(1)d. Overview of event and results - research poster session

Poster session image

[Overview (O-6): SIP-adus R&D Activities]

SIP-adus Workshop 2018 

SIP-adus R&D Activities (2)



Cyber Security

- Common models of AD for threat analysis
- Validation/evaluation methods and criteria
- Simplified certificate validation method for V2X communication

User friendliness (JAMA)

- Common architecture model
- Use cases of Automated Driving (JAMA)
- Threat Info. (JPCERT/CC, Auto-SAC)
- Evaluation (Attack) Info. (Auto-SAC)

Vulnerability Evaluation

- Countermeasure
- Level of Countermeasure

WIFI **Telematics**

Threat analysis tool

Comparison with current Threat analysis (JasPar)

Cyber Security Evaluation Guideline

Pedestrian Traffic Accident Reduction

- Vehicle-to-Pedestrian (V2P) Communication
- Infrastructure radar with V2I communication

Next Generation Transport

Realize consistent accessibility for all people including elderly and handicapped person

ART information center

- Map for Pedestrian
- Bus Service Information
- Advanced Transfer Guide
- Bus Service Operator

Advanced Information

- Advanced Information
- Priority System (ITS)
- ITS Roadside Unit
- Bus Congestion Information
- Priority Building Function
- Congestion Prediction
- STATION
- Advanced Transfer Guide
- Search Information
- Search Information
- Search Information

[FOT (F-4): Experiments of automated driving support in rural areas are underway]

SIP-adus Workshop 2018 

The 2nd Phase of SIP-adus (2018-2022)



Experiments of automated driving support in rural areas are underway.

Experiments of automated driving are currently underway at 13 roadside stations nationwide. It is expected to be implemented in 2020.

These stations are expected to serve as small hub in the future. These are located at the local authorities which face on an aging society, that is, people of 65 years old or older account for 30% or more of the total population.

Collecting agricultural products

Roadside station 'Michi-no-Eki'

- Product promotion centre selling local products
- Information provision facilities
- Installation of an automated car control centre
- Development of an automated car station
- Calling systems using mobile phones, etc.
- electromagnetic guide line

rural areas

GPS

Recognising an electromagnetic guide line

Example of V2I

A system for recognising an electromagnetic guide line placed on the road surface can be built into the automated driving system, in order to enhance safety on roads in mountainous areas where road alignment tends to be less than optimal.

Increased dining opportunities for elderly people

Borrowing and returning books at a library

Transport to and from the city hall

Transport to and from a daycare centre for elderly

2. Hosting of SIP-adus Workshop2018

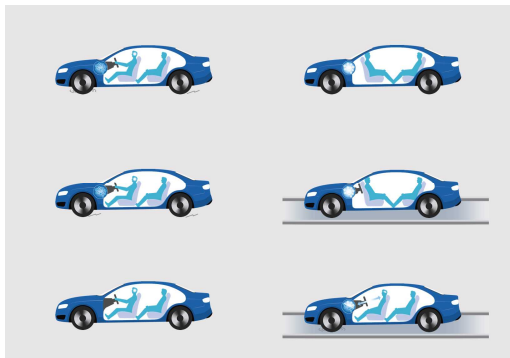
(1)e. Overview of event and results - creation of digital content

Results of creation of digital content

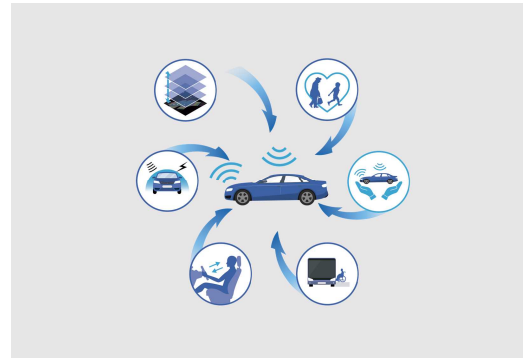
- ✓ Icons were created for the posters shown at SIP-adus Workshop2018, as were illustrations for use inside the lecture materials.
- ✓ By providing visual representations of abstract content, we enabled information to be conveyed effectively and in an easily understood format.
- ✓ By using these consistently in SIP-adus activities for disseminating information, we expect it to become easier to recognize the information as part of a series, and to lead to greater recognition of SIP-adus.

Icons

[Represents level of automated driving]

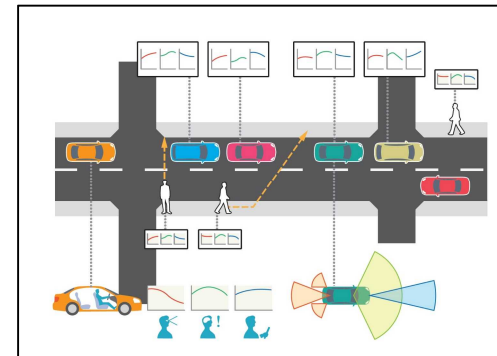


[SIP-adus Phase 1 core technology perspective: 5 important issues & 6 domains]

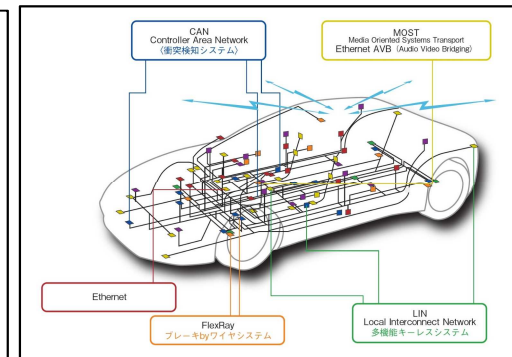


Illustrations

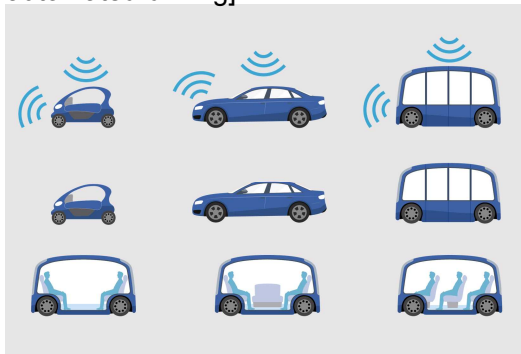
[Reducing pedestrian accidents]



[Cybersecurity]



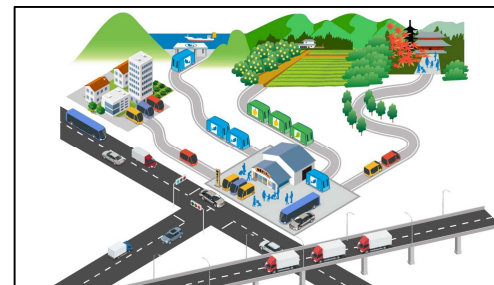
[Representing the 3 domains of automated driving]



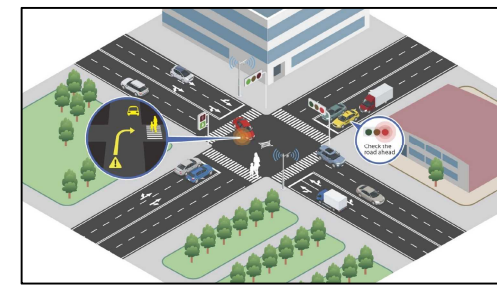
[Representing SIP-adus]



[Next Generation Transport]

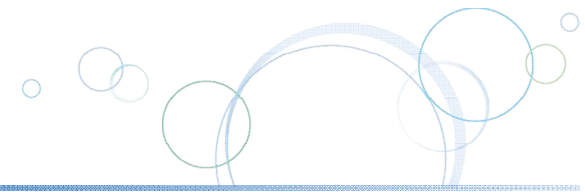


[FOT]



2. Hosting of SIP-adus Workshop2018

(2) Verification of results



Verifying results based on survey

- ✓ 89% of breakout workshop participants and 81% of general participants gave high scores of at least 4 (4-5) for the workshop as a whole, and even compared to the previous year the equivalent scores rose by 6% for breakout workshop participants and by 3% for general participants.
- ✓ Viewing evaluations by session, breakout workshop participants gave higher scores of at least 4 to Connected vehicles (95%), Breakout workshop (92%), and Regional activities and FOTs (88%) in that order. For general participants, Regional activities and FOTs (82% for the equivalent evaluation) and Connected vehicles (79% for the equivalent evaluation) took first and second place respectively.
- ✓ 51% of breakout workshop participants visited the poster session compared to 79% of general participants, and 86% of BW participants gave a score of at least 4.
- ✓ For next year, 70% of BW participants and 85% of general participants have indicated their intention to attend, showing that there are expectations that it will continue to be held.
- ✓ Multiple comments from both BW and general participants suggested that there were too many lectures per session, and that the overall program time was too long. There were also some indications to the effect that lectures should be given in the native language of the speaker, with simultaneous interpretation, which will no doubt be considered for next time.

[Survey response rate]

After the event an online survey was sent to all participants to gather feedback on the SIP-adus Workshop.

We achieved a survey response rate of 53% from all participants. Compared to last year, the response rate of the breakout workshop participants was unchanged, but the response rate for general participants fell 39% year on year.

Because general participants indicated that filling in a survey form at the venue would be simpler and a more effective use of time than an online survey, we believe that would be an effective way of raising the response rate.

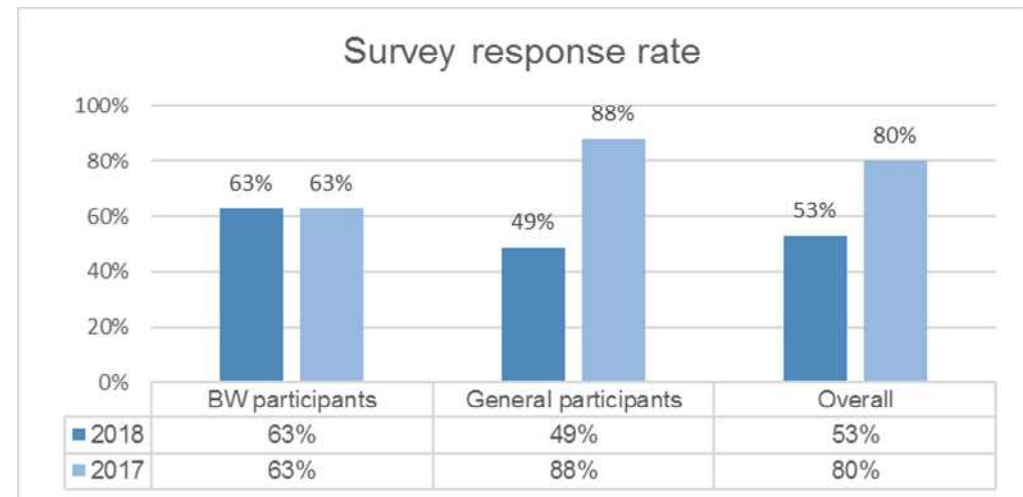
Survey response rate (respondents divided by participants)

	2018	2017
BW participants	63%(91/145)	63%(2/130)
General participants	49%(153/315)	88%(239/272)
Overall	53%(244/460)	80%(321/402)

[How participants learned of the event]

In the 72% of cases the trigger for general participants learning of this Workshop was either a source of internal information at affiliated organizations, the ITS Japan website or the Cabinet Office website, in that order, and with no major changes from the sources of information recorded in the previous year.

Also, breakout workshop participants all attended as a result of invitations.



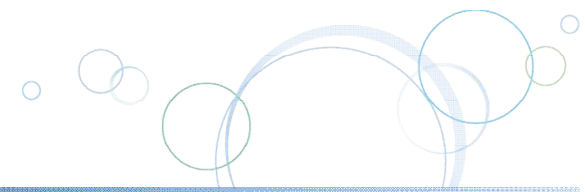
How participants learned of the event

	2018	2017	% YoY
Source of internal information at affiliated organizations	29%	30%	-1%
ITS Japan website	23%	25%	-2%
Cabinet Office website	20%	21%	-1%
Information from related meetings	11%	27%	-16%
Other	10%	8%	3%
Word of mouth	7%	13%	-6%

*However, in 2017 there were multiple responses

2. Hosting of SIP-adus Workshop2018

(2) Verification of results



[Attendance]

1. Participation dates

The greatest number of breakout workshop participants attended on the last day, November 15, while the largest number of general participants visited on the first day, November 13.

Participation dates		(Units: people)		
	2018	2018/11/13	2018/11/14	2018/11/15
BW participants		53	46	85
General participants		124	98	-

2. Past attendance

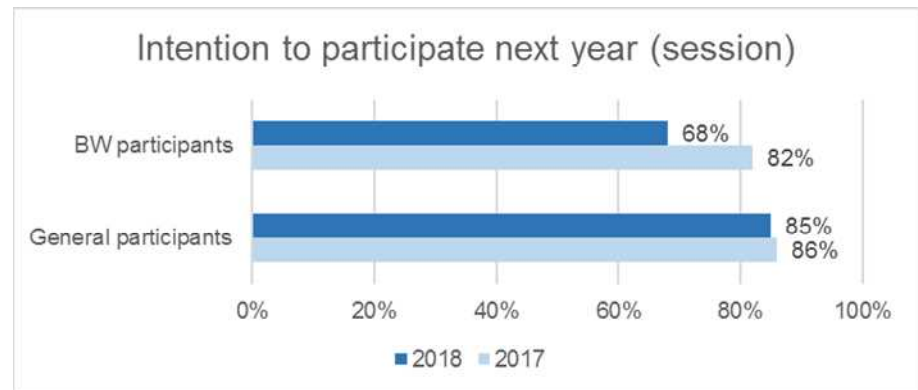
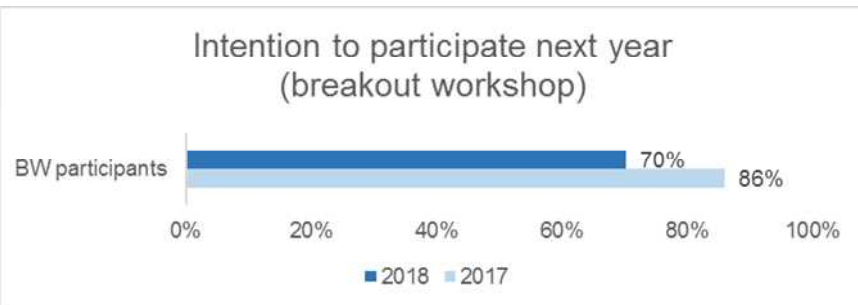
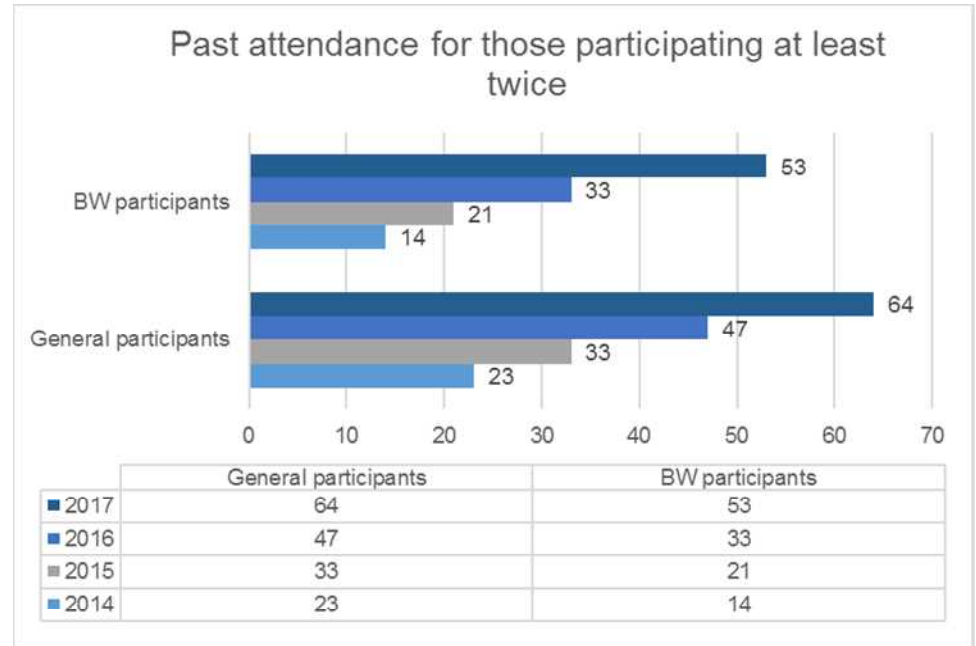
More than half of both the breakout workshop participants and the general participants had previously participated in SIP-adus Workshops. While there were many participants who had participated since 2017, there were also many who had participated multiple times over successive years.

Past attendance for those participating in 2018 (Units: people)

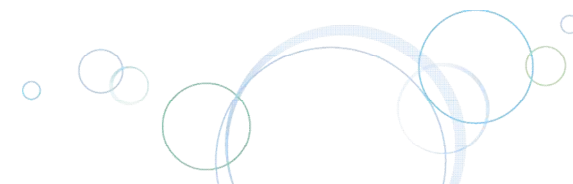
	First time	At least twice	Attendance rate for "at least twice"
BW participants	32	59	65%
General participants	75	78	51%

3. Intention to participate next year

Many breakout workshop participants and general participants expressed the intent to attend next year also, but compared to the previous year the number of breakout workshop participants expressing that intent has declined.



2. Hosting of SIP-adus Workshop2018 (2) Verification of results



[Workshop evaluation (breakout workshop participants)]

1. Workshop overall evaluation

89% of breakout workshop participants gave a high score of at least 4 (4-5) for the workshop as a whole, with an average score of 4.35. Even compared to the previous year breakout workshop participants giving a score of at least 4 (4-5) increased by 6%, showing that evaluations for the Workshop as a whole have become more positive.

Workshop evaluation (BW)

	2018	2017	% YoY
Average score	4.35	4.22	+0.13
High satisfaction (score 4-5)	89%	83%	+6%
Low satisfaction (score 1-2)	2%	1%	-1%

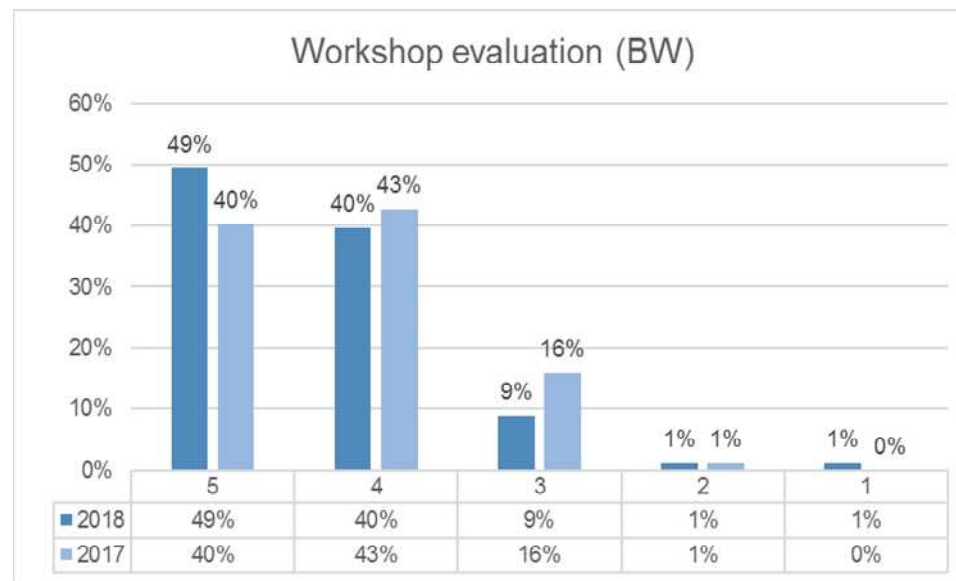
Score	Notes (Japanese)	Notes (English)
5	Very satisfied	Very satisfied
4	-	-
3	OK	OK
2	-	-
1	Very dissatisfied	Very dissatisfied

2. Things that made participants glad to have participated

Many BW participants, both in the plenary session and breakout workshop, responded that the Workshop had been useful for the practical implementation of automated driving systems. There were multiple responses to the effect that at the breakout workshop in particular they gained valuable and specialized information, or information that will be useful in future.

These items were also included in the top 3 for the previous year.

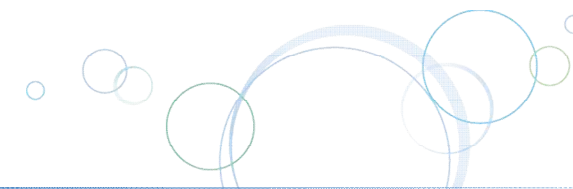
Reference: 2017 BW (for both plenary session / breakout workshop) top 3	Response rate
I obtained some valuable specialized information.	51%
I made personal contacts from among fellow attendees that may lead to the development of business in the future.	46%
I think international meetings such as these are effective in facilitating practical implementation of automated driving systems	45%



BW: I was glad I participated (top 5)	Response rate
I would like to participate actively in future.	45%
I think international meetings such as these are effective in facilitating practical implementation of automated driving systems	42%
SIP-adus content was easy to understand	37%
I obtained some valuable specialized information.	36%
There were some good points about the operation of the SIP-adus workshops.	35%

BW: I was glad I participated (breakout workshop, top 5)	Response rate
I obtained some valuable specialized information.	62%
I obtained important information from attendees that will be useful in the future.	59%
I think international meetings such as these are effective in facilitating practical implementation of automated driving systems	55%
There were some good points about the operation of the SIP-adus workshops.	45%
I gained an understanding of policies and strategies related to automated driving systems in Japan.	31%

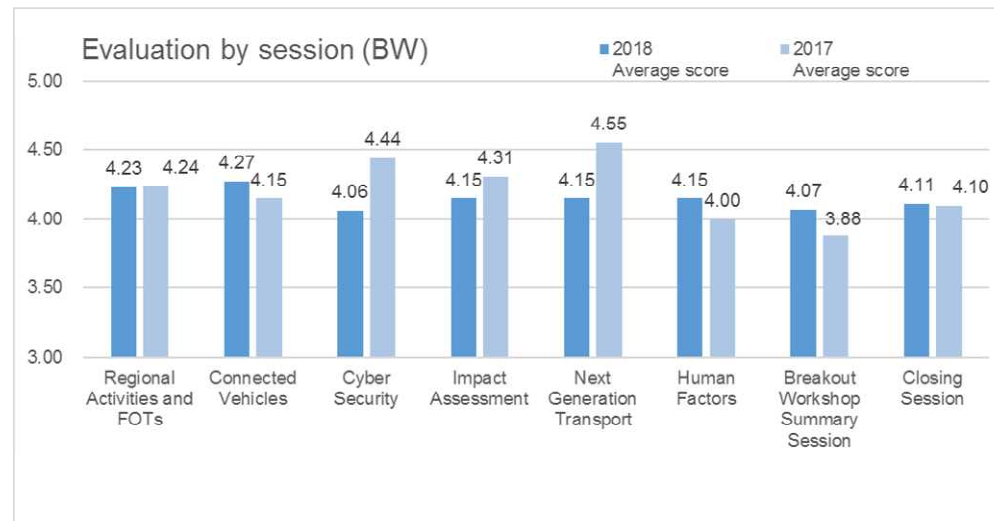
2. Hosting of SIP-adus Workshop2018 (2) Verification of results



[Workshop evaluation (breakout workshop participants)]

3. Evaluation by session

In nearly all sessions, at least 80% of breakout workshop participants gave a high score of at least 4 (4-5). Within that, participants gave higher scores of at least 4 to Connected vehicles (95%), Breakout workshop (92%), and Regional activities and FOTs (88%) in that order. Conversely, compared to the scores by session for the previous fiscal year, there was a downward trend for Cyber security and Next generation transport, although it was more or less unchanged from the previous year.



4. Comments from breakout workshop participants (parentheses indicate the origin of the commenter)

[Good points]

- Every year, the level of the content becomes more consistent and shows overall improvement. (Japan)
- A very useful opportunity to present and discuss the current situation in Japan and overseas. (2 overseas participants)
- It was well managed, with a positive atmosphere and I enjoyed attending. (Overseas)
- The breakout workshop time frames were extended, enabling more substantial exchanges of opinion. (Japan)

[Things that could be improved]

- In some sessions there were too many presentations. (Overseas)
- I think it would be good if simultaneous interpreting were used so that presentations could be made in one's native tongue. (2 overseas participants)
- In order to allow more time for important networking at an international conference, the coffee breaks should be made longer. (Overseas)

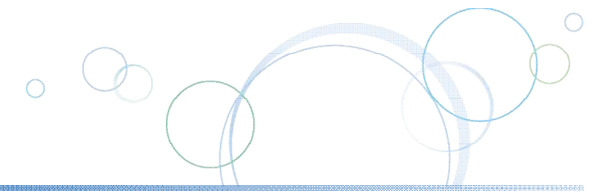
[Things participants would like to see next time]

- It would be good to have demonstrations to make SIP-adus results easier to understand. (3 overseas participants)
- I would like to discuss the actual problems, and how to deal with them, that occur when transitioning from demonstration tests of automated driving to implementation in actual society. (Japan, overseas)

Evaluation by session (BW)

	2018 Highly ranked (4-5)	2018 Average score	2017 Average score	Average score % YoY
Opening Session	85%	4.30	N/A	N/A
Regional Activities and FOTs	88%	4.23	4.24	-0.01
Dynamic Map	N/A	N/A	4.24	N/A
Connected Vehicles	95%	4.27	4.15	0.12
Cyber Security	80%	4.06	4.44	-0.38
Report Session	80%	3.97	N/A	N/A
Impact Assessment	82%	4.15	4.31	-0.97
Next Generation Transport	82%	4.15	4.55	-0.40
Human Factors	85%	4.15	4.00	0.15
Breakout Workshop	92%	4.51	N/A	N/A
Breakout Workshop Summary Session	77%	4.07	3.88	0.19
Closing Session	73%	4.11	4.10	0.01

2. Hosting of SIP-adus Workshop2018 (2) Verification of results



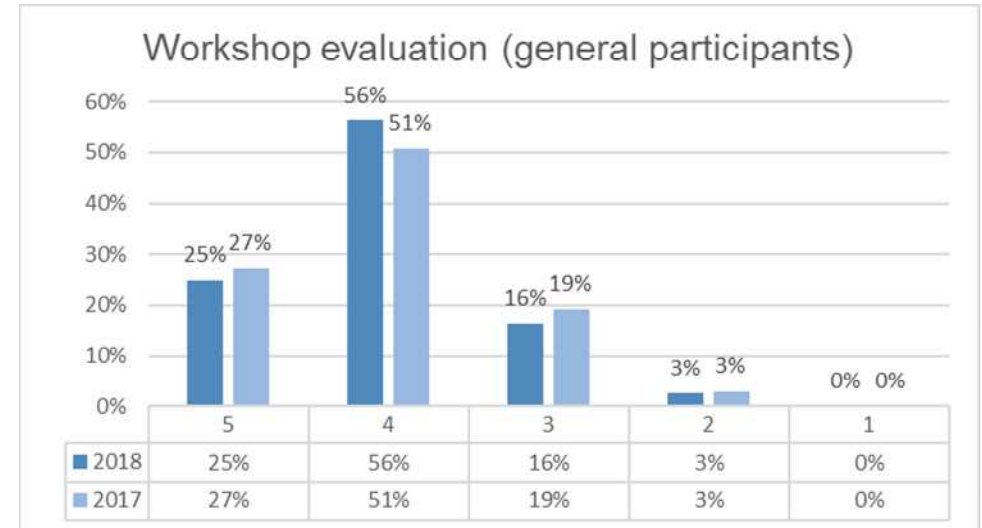
[Workshop evaluation (general participants)]

1. Workshop overall evaluation

81% of general participants gave a high score of at least 4 (4-5) for the workshop as a whole, with an average score of 4.03. Even compared to the previous year, general participants giving a score of at least 4 (4-5) increased by 3%, but overall there was no major change.

Workshop evaluation (general participants)

	2018	2017	% YoY
Average score	4.03	4.02	+0.01
High satisfaction (score 4-5)	81%	78%	+3%
Low satisfaction (score 1-2)	3%	3%	-0%



2. Things that made participants glad to have participated

Many general participants responded that the Workshop had enabled them to understand moves towards the practical implementation of automated driving systems (57%). There were many responses to the effect that the Workshop was effective in facilitating the practical implementation of automated driving systems (53%), and that it had allowed them to gain valuable specialized information (48%).

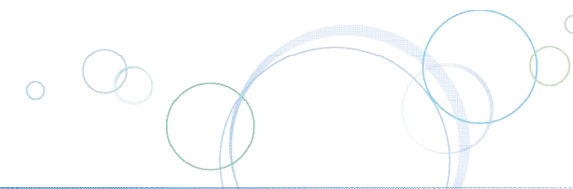
These items were also included in the top 3 for the previous year.

General participants: I was glad I participated (top 5)	Response rate
I gained an understanding of activities aimed at practical implementations of automated driving systems.	57%
I think international meetings such as these are effective in facilitating practical implementation of automated driving systems	53%
I obtained some valuable specialized information.	48%
SIP-adus content was easy to understand	46%
I would like to participate actively in future.	44%

Reference: 2017 (or participants)	
I obtained some valuable specialized information.	44%
I think international meetings such as these are effective in facilitating practical implementation of automated driving systems	44%
I gained an understanding of activities aimed at practical implementations of automated driving systems.	31%

2. Hosting of SIP-adus Workshop2018

(2) Verification of results

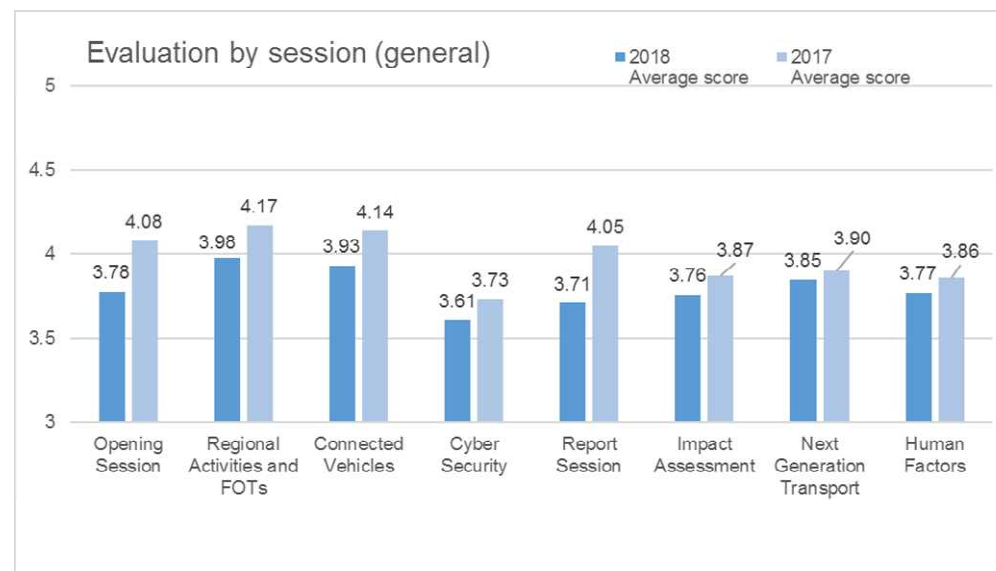


[Workshop evaluation (general participants)]

3. Evaluation by session

General participants gave an average score of at least 3.5 in nearly all sessions, but compared to the previous year the evaluation declined for all sessions.

Sessions in which there were many participants who gave scores of at least 4 (4-5) included Regional activities and FOTs (82% for the equivalent evaluation) and Connected vehicles (79% for the equivalent evaluation), which took first and second place respectively.



4. Comments from general participants (parentheses indicate the origin of the commenter)

[Good points]

- This is the fifth time I have attended the SIP-adus Workshop, and I feel it is superior to any of the related international conferences. (Overseas)
- I came away thinking it was a highly concentrated Workshop. (Japan)
- It was well managed and the lectures were kept to schedule. (4 attendees from Japan)
- Materials were made available on the website and information was shared quickly. (3 attendees from Japan)

[Things that could be improved]

- There were too many lectures and the program was too long. (3 overseas participants)
- Because each speaker had only a limited time, it was not possible to ask them about information that was not in the materials, or about their own opinions. There was almost no time for Q&A. (Japan, overseas)
- There should be time for panel discussions and Q&A with the audience. (Overseas)
- It was difficult to hear the English during the lectures given by Japanese presenters. If it were conducted in Japanese, would it not be more efficient, and would not result in deeper discussions of the information? (2 attendees from Japan, 1 from overseas)

[Things participants would like to see next time]

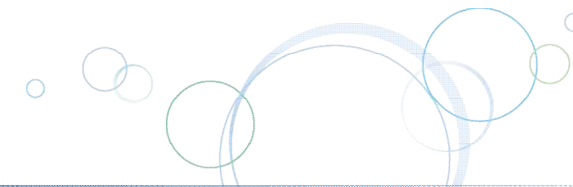
- Trends in legal systems in relation to automated driving. (Japan, overseas)
- It would be good to have demonstrations. (3 attendees from Japan)
- What about operating a minibus between the nearest station and the venue? (Japan)

Evaluation by session (general)

	2018 Highly ranked (4-5)	2018 Average score	2017 Average score	Average score % YoY
Opening Session	68%	3.78	4.08	-0.30
Regional Activities and FOTs	82%	3.98	4.17	-0.19
Dynamic Map	N/A	N/A	3.96	N/A
Connected Vehicles	79%	3.93	4.14	-0.21
Cyber Security	59%	3.61	3.73	-0.12
Report Session	64%	3.71	4.05	-0.34
Impact Assessment	69%	3.76	3.87	-0.11
Next Generation Transport	75%	3.85	3.90	-0.05
Human Factors	68%	3.77	3.86	-0.09

2. Hosting of SIP-adus Workshop2018

(2) Verification of results



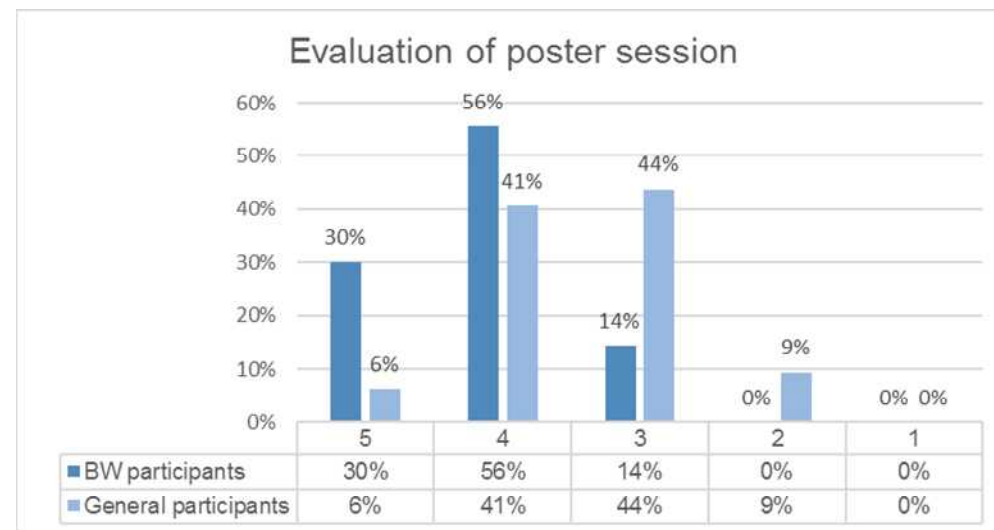
[Poster session]

1. Evaluation of poster session

51% of breakout workshop participants responding to the survey, and 79% of general participants visited the poster session. Conversely, while 86% of breakout workshop participants gave a score of at least 4, the equivalent evaluation for general participants was just 47%, showing that breakout workshop participants valued the poster session more highly than did general participants.

Poster session viewing rate/evaluation

	Viewing rate	Highly ranked (4-5)	Average score
BW participants	51%	86%	4.16
General participants	79%	47%	3.44



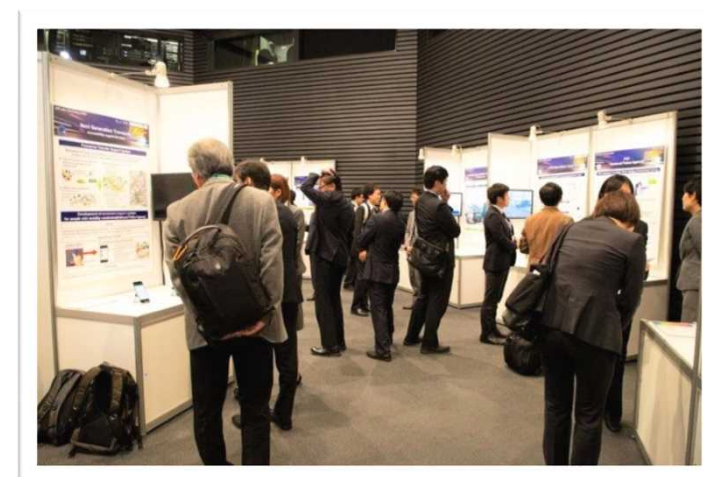
2. Opinions and thoughts about the poster session

[Good points]

- I rate the poster session highly for the use of English in the materials. (General, overseas)
- The route to the poster session was easy to follow. (General, Japan)
- With the poster session moving to the same floor as the lecture venue, it was easy to see. (General, Japan)

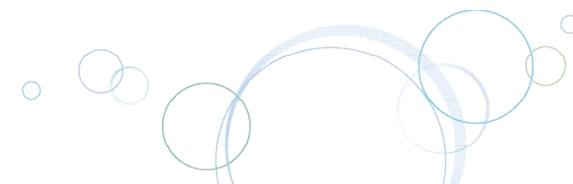
[Things that could be improved]

- If the poster session were made consistent with the main session in terms of objectives, schedule and issues, it would be easier to view. (General, Japan)
- There was a monitor set up right next to the panel, and the screen was not visible from the direction from which the panel was viewed. (BW, Japan)



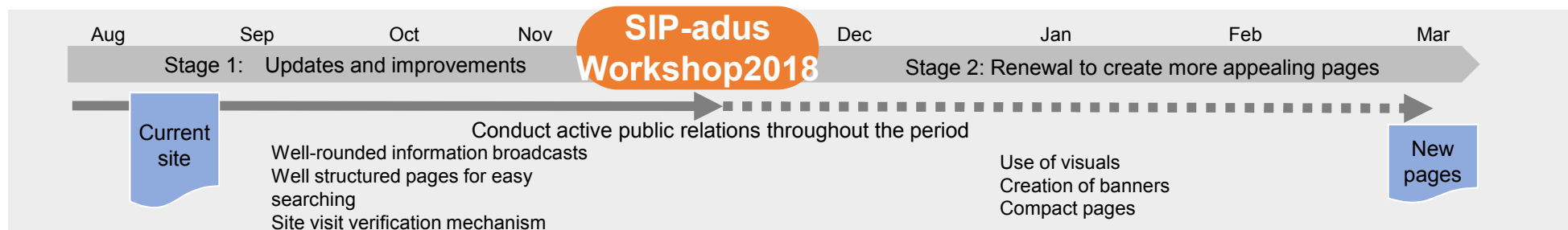
3. Transmitting information using the website

(1) Overview of information transmission



Overview of information transmission

- ✓ Through the period of the investigation, we used the website to actively publicize research and development results, as well as event information aimed at encouraging the receptivity of society to automated driving, and to strengthen our information transmission capabilities in relation to automated driving.
- ✓ We regard the period up to SIP-adus Workshop2018 as being Stage 1, and improved the structure of the pages to make searching them easier, with the aim of creating an appealing public relations medium that would motivate people to attend the Workshop. We also set up Google Analytics to create a mechanism for verifying the response to the website by counting site visits.
- ✓ We positioned the period after SIP-adus Workshop2018 as the beginning of Stage 2, and worked to renew the website by utilizing visual elements and banners to achieve far more appealing and compact pages.



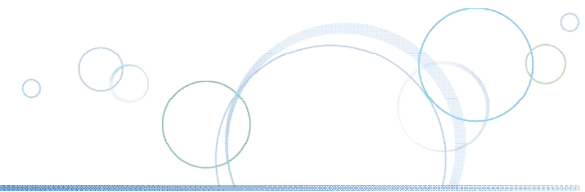
Information transmission: Stage 1 <Updates and improvements>



Page	Details of updates and improvements
Home page	- Banner image updated to SIP-adus workshop key visual - Simplified global navigation and made it easier to search
What is SIP?	- Updated descriptive content and documents to which links pointed
Research and development	- Posted the most recent research results to both the Japanese and English pages - Changed from displaying by fiscal year and agency to displaying by theme, and made searching more convenient - Made the theme display collapsible, making it easier to take in at a glance
Events	- Published announcement of SIP-adus Workshop2018, as well as general participant registration/materials - Posted the most recent related event information to both the Japanese and English pages
Demonstration tests	- Posted most recent information on demonstration tests

3. Transmitting information using the website

(1) Overview of information transmission



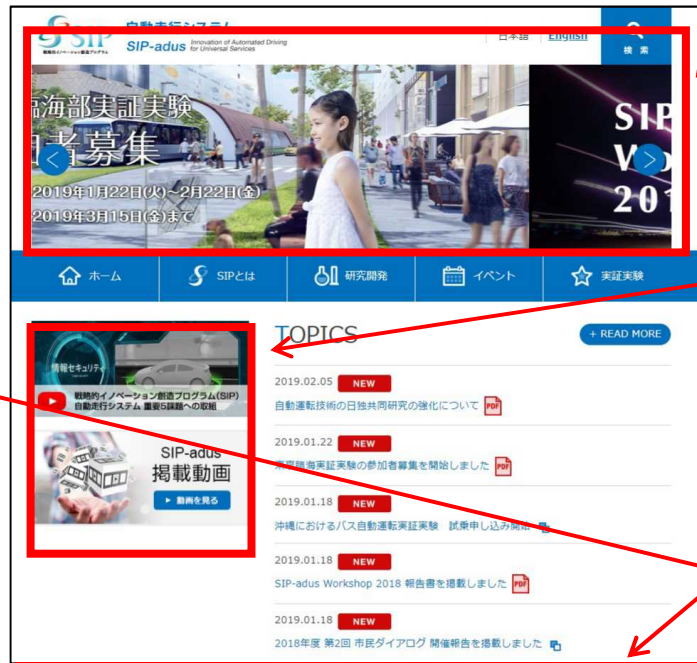
Information transmission: Stage 2 <Renewal>

Page	Details of renewal
Home page	<ul style="list-style-type: none"> - Updated to make the banner image a slide show, so that when the banner is clicked it jumps to the page for upcoming events. Updated to a moving page in which the banner visual changes - Summarized YouTube videos, and set up a link banner. Made it a page that is more appealing to general users. - Made the images more compact overall, and expanded the area visible at first view
Events	- Changed from displaying by fiscal year to displaying by category, and made searching more convenient
Demonstration tests	<ul style="list-style-type: none"> - Made the topics display collapsible, making it easier to take in at a glance - Made the descriptive content simpler, to allow for more compact viewing
Video page	- Set up new page linked to the banner on the home page

Home page of old website



Home page of new website



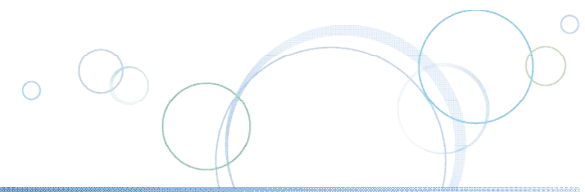
Banner changes in slide show
Jumps to event page shown.

Link to newly added YouTube video page.

Expansion of area visible at first view

3. Transmitting information using the website

(2) Verification of results

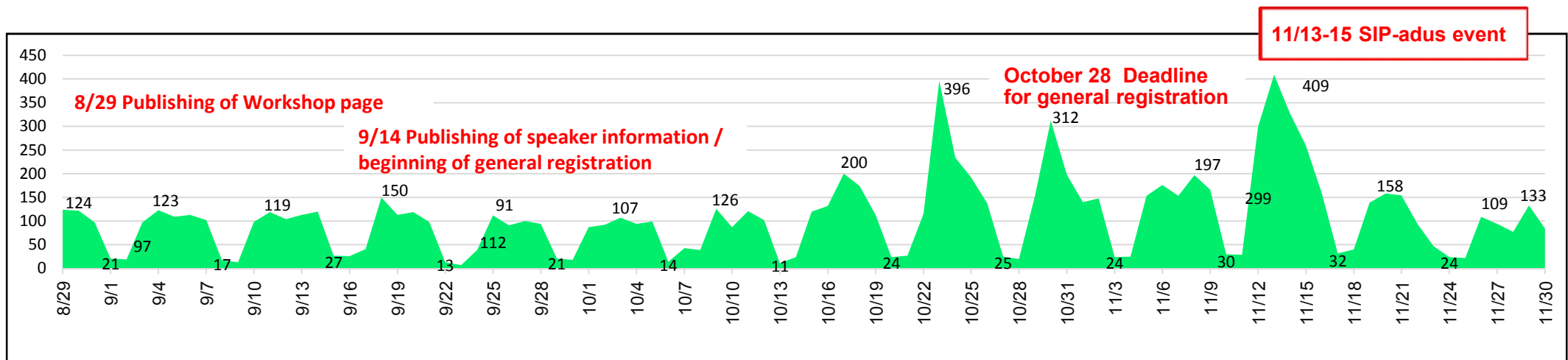


Verifying results using Google Analytics

- ✓ Google Analytics has been installed for the SIP-adus website, and we verified the response to the website by counting site visits.
- ✓ In the run-up to the SIP-adus Workshop2018 event, visits to the site rose, peaking during the event itself, then falling dramatically after the ending of the event. This leads us to believe that many users visited the website as a result of their participation in SIP-adus Workshop2018.
- ✓ Visits to the site showed the same tendency the previous year also, and because the peak for both years was within the number of participants at SIP-adus Workshop, one could say that the use of the website is closely connected to participation at SIP-adus Workshop.
- ✓ In order to use the SIP-adus website as a tool for providing information in a broader sense, and we expect to see results from initiatives to both make the content more substantial, and to extend effective public relations.

No. of users

- ✓ In terms of daily users, the number of site visits increased from a point about one month before the SIP-adus Workshop2018 event, peaking during the event itself (with 409 daily visitors to the site), with a second peak being recorded just before the deadline for registrations for general participants on October 28 (396 daily visitors to the site).
- ✓ The SIP-adus website was accepting registrations from general participants between September 14 and October 28, and considering the sharp decline in the site visits after the ending of SIP-adus Workshop2018, it seems likely that many users visited the website as a result of their participation in SIP-adus Workshop2018.

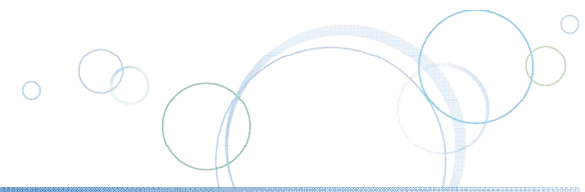


<*User numbers>

Google Analytics uses both IP (Internet Protocol) addresses and cookies to analyze user data. Because each device has a different IP address, the “User numbers” do not represent the individual users distinguished, but rather they mean that the browser used to view the website is distinguished and counted, and this data is aggregated over a certain period. For example, in the event that a single user makes use of a PC using Internet Explorer, a PC using Chrome, and a smartphone to access websites, for data-aggregation purposes the “three users” figure, which represents the total number of browsers, will be counted as separate users.

3. Transmitting information using the website

(2) Verification of results



Users by device

- ✓ By using Google Analytics the device used by the visitor can be learned. For this website, we found that 87% of visitors access the site from a PC browser (desktop), and that the use of smartphones (mobile) and tablets is limited, from which we infer that visitors accessed the site from the office.
- ✓ As a public relations medium for the SIP-adus Workshop2018, we distributed cards with QR codes at related events. However, we were not able to trace visitors who had scanned the QR code to access the website. In order to enable this, optional parameters must be added to the URL link that is generated by the QR code (see figure below). If we were to use parameters, we would be able to verify the effectiveness of using QR codes as a public relations medium going forward.

<*Desktop>

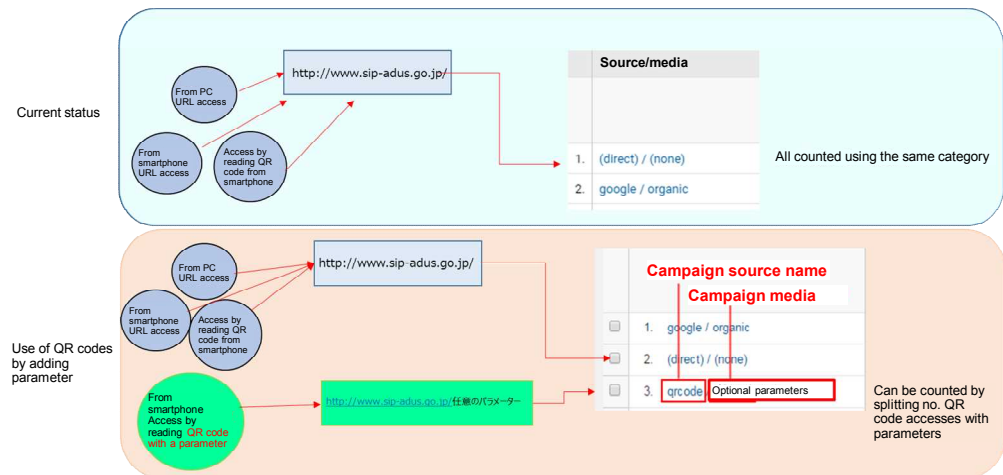
"Desktop" represents the total of all accesses by browsers running on a PC. These are aggregated by OS version.

Users by country

- ✓ In terms of users by country, users in Japan account for more than 80% of the total, and this is similar to the breakdown by country of origin for participants in SIP-adus Workshop2018.
- ✓ Going by this, we believe that many users visited the website as a result of their participation in SIP-adus Workshop2018.

Website visitors by device (8/30 - 9/30)

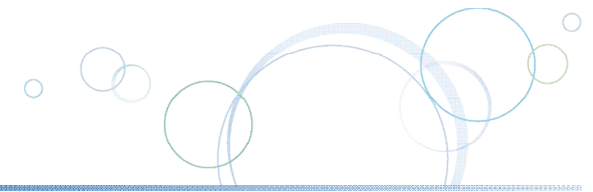
Device category	No. of users	% total
PC (desktop)	1610	87.2%
Smartphone (mobile)	161	8.7%
Tablet	75	4.1%
Total	1846	



Website visitors by country (8/30 - 9/30)

Country	No. of users	% total
Japan	1340	83.2%
USA	58	3.6%
China	35	2.2%
South Korea	32	2.0%
Germany	25	1.6%
Denmark	24	1.5%
Taiwan	19	1.2%
UK	18	1.1%
France	12	0.7%
Belgium	9	0.6%
Other	38	2.4%
Total	1610	

4. Final thoughts



Promoting research and development going forward

At the end of the report, with regard to the hosting of the SIP-adus Workshop2018, we have arranged the results from the implementation of the participant survey, and with regard to the transmission of information from the SIP-adus website, we have laid out the results of the verification of site visit numbers using Google Analytics, and courses of action that might be of use for the promotion of future research and development.

SIP-adus Workshop2018

[1] Facilitate more lively communications between the speaker and the participants

Rather than a session style in which the speaker presents and the participants listen, if we were to arrange more time and sessions in which Q&A and exchanges of opinion are possible, it would seem possible to enliven the communication between speakers and participants, and further raise participant satisfaction. For that to happen, we would need to reconsider the number of sessions and the schedule.

For example, we could set up new sessions that offer opportunities for dialogue to general participants, while considering setting up sustained working group activities for breakout workshop participants.

[2] Increase the number of viewing opportunities for the poster session

Although 79% of general participants viewed the poster session, the viewing rate for BW participants was no more than 50% or so. This might be because although the breakout workshop was prepared for the final day of the event on November 15, the poster session ended on November 14. This time we devised various measures related to the way the posters were shown, and video was played, as well as the location of those providing explanations, but we expect poster session viewing opportunities to be increased for those who attend the event only to participate in the breakout workshop.

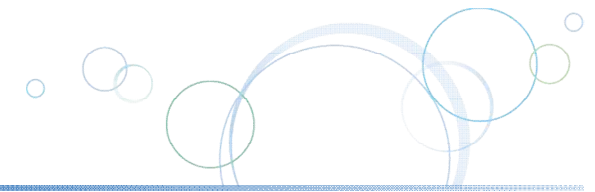
[3] Set up experience-based sessions

The survey recorded some opinions to the effect that it would be good to have some demonstration sessions. The realization of automated driving requires more than discussions and classroom theory. If participants had sessions in which they could experience some aspect of automated driving for themselves, it is likely that they would leave a deeper impression. For example, conduct test drives of automated driving vehicles and demonstration tests in side-by-side venues, or put an experience-based simulator in the poster session venue.

[4] Encourage continued participation

This time, the number of BW participants attending for the first time was 32%, and the same number for general participants was around 75%. On the other hand, the number intending to participate next year is about 70% for BW participants, and around 85% for general participants. In order to deepen understanding and build experience in preparation for the realization of automated driving, it is desirable that participants attend consistently. It is also important to invite to the breakout workshop the younger researchers who will be responsible for the next generation, and to move forward with their development. By driving the evolution of the content and composition of the workshop, we expect to be able to encourage more sustained participation.

4. Final thoughts



SIP-adus website

[1] Raise awareness of the site

Through this investigation, we have learned that many users visited the website as a result of their participation in SIP-adus Workshop2018. In order to increase the number of users going forward, it will be necessary to consider methods to raise awareness of the site, such as by devising ways to increase the keyword search hit ratio, or asking related institutions to put links to SIP-adus on their own websites. We believe that the use of SNS to disseminate information could be an effective method of inducing users to visit the SIP-adus website.

[2] Provide appealing content

The current situation is that we can provide very substantial content in the form of the results of research and development and archives of events. Going forward, we anticipate the transformation of this site into a tool for disseminating information on how to achieve practical implementations of automated driving, so as to attract to the site a more diverse range of people from a wider area. In order to accomplish that, it will likely be necessary to consider more eye-catching content that is also easy to understand, such as visual and audio content. Thanks to the renewal we have been able to add slide show banners, and set up a page that gathers together YouTube videos. In future, we expect more significant improvements to information content.

[3] Consistent and appropriate public relations

For the implementation of automated driving in actual society, sustained public relations and educational activities related to demonstration tests and events will be indispensable going forward. In order to use this website as a tool for broadcasting information, a mechanism must be prepared beforehand to accurately grasp the effects of these public relations efforts in such cases. For example, when distributing flyers with QR codes at an event, parameters could be added to the URL beforehand so as to specify the route taken to view the site. If it becomes possible to verify the effect of the public relations, it should be feasible to conduct more suitable public relations through the website by focusing on specific targets and methods.

[4] Cooperating with next-generation education

While SIP-adus enters Phase 2 and moves ahead with advanced research on the one hand, on the other hand, for the people to accept changes in cutting-edge technology and utilize it in their daily lives, it will be important to approach the people that will use this technology. Given that the current generation of schoolchildren will be adults by the time that automated driving and next-generation transport systems are being used by society, and that they will become the actual users of these technologies, the education of such children would likely be very effective. Going forward, one possibility could be approaching such children by means of extracurricular activities for schools, or visits to schools by those involved to schools for on-site teaching on the subject of the realization of practical implementations of automated driving. In such situations, in order to use the SIP-adus website effectively, we anticipate that the structure will be made even simpler to understand, and the content enhanced to be made even more attractive.