

## Wrap-up of the 4<sup>th</sup> ADS IWG session

Date: October 8 (Tuesday) – 11 (Friday), 2024

Venue: The Shard 17F (Warwick Business School) London

Attendance:

Co-Chair: UK, USA, Canada, EC, Japan

Secretaries: AAPC, SAE, JASIC

Ambassadors: NL, Australia

GRVA chair, EC/JRC, Germany, France, NL, UK, Finland, Sweden, China, Korea, Japan, ETSC, CLEPA, OICA, SAE, SAFE, ITU, ICEDD (physical participants: 50, remote participants: 15)

➤ ADS IWG Co-chair/UK chaired the session.

Agenda item	Action item, notes, etc.
2. Adoption of the agenda	The proposed agenda (ADS-04-02) was approved.
3. Adoption of the wrap-up of the previous session	The wrap-up of the previous session (ADS-04-01) was approved without any modifications.
5. WP.29/GRVA ADS related activities	<ul style="list-style-type: none"> <li>➤ Ambassador/Australia reported on the activities of GRVA WS on ADS (GRVA-20-20).</li> <li>➤ UK/VCA reported on the activities of TF AVC on behalf of the co-chairs of the TF-AVC. (ADS-04-19) <ul style="list-style-type: none"> <li>- What are the reasons for adding Type I (with fallback user) and Type II (without fallback user) categories? (Co-chair/USA) <ul style="list-style-type: none"> <li>→They stem from a need for GRSG. (UK/VCA)</li> <li>→For example, seatbelt requirements differ depending on the presence or absence of fallback user. It is a matter of safety although it has no relation with DDT requirements. (NL/RDW)</li> <li>→Fitness Group started its activities based on these categories. (UK/VCA)</li> </ul> </li> <li>- Would Coordination between GRSG and GRVA be necessary on categorization? (Co-chair/Canada)</li> <li>- Would the new categories proposed by TF AVC have any impact on ADS IWG activities? (Co-chair/USA)</li> <li>- There should be no contradiction between the activities of TF AVC and those of ADS IWG as the text from the work of the IWF-ADS was used to draft the proposed definitions. (Co-chair/UK)</li> <li>- The necessity of category X (equipped with an ADS, designed to carry occupants) and category Y (equipped with an ADS, not designed to carry occupants at any time) is not agreed yet. (Co-chair/Canada)</li> <li>- It was noted that letters X and Y can have different meanings in national law. Category X means deletion of vehicle registration and category Y means completely crushed vehicle somewhere. Using categories X and Y is confusing. (SAE)</li> <li>- Definitions proposed by TF AVC will also be considered by ADS IWG and should be submitted to the OPI for definitions. (Co-chair/Canada)</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>➤ UK/DfT reported on the activities of Scenario catalogue WS. (ADS-04-23)             <ul style="list-style-type: none"> <li>- It is planned to have the next session on December 2. (France)</li> </ul> </li> <li>➤ EC/JRC reported on EDR/DSSAD activities. EDR/DSSAD Co-chair/Japan supplemented.             <ul style="list-style-type: none"> <li>- EDR/DSSAD IWG plans to submit Guidance document to GRVA next January. (EC/JRC)</li> <li>- Coordination between EDR/DSSAD and ISMR would be such SIG (Special Interest Group) established for UN R157. (EDR/DAASA Co-chair/Japan)</li> <li>- IWG leadership team to engage with IWG-EDR/DSSAD leadership on alignment of expected delivery content and timelines.</li> </ul> </li> <li>➤ ADS Co-chairs should be more deeply involved in coordination between ADS IWG and other related IWGs /TFs. (Co-chair/Canada)             <ul style="list-style-type: none"> <li>- Would the coordination have any impact on OPI activities? (EC/JRC)                 <ul style="list-style-type: none"> <li>→ We will see about that by Seoul meeting in December. (Co-chair/Canada)</li> </ul> </li> </ul> </li> <li>➤ UK/VCA reported on TF FADS activities. It was noted that other regulations set requirements on or for a driver (e.g. UN R16 requirements on safety-belt reminders); how should such requirements be handled for automated vehicles?             <ul style="list-style-type: none"> <li>- Option for coordination between TF FADS and ADS IWG; (France)                 <ol style="list-style-type: none"> <li>(1) Make regulations separately</li> <li>(2) Aggregate all ADS requirements to a single regulation</li> <li>(3) Let each Contracting Party decide what to do with ADS related requirements made by TF FADS                     <ul style="list-style-type: none"> <li>→ GR level discussion would be necessary. (AAPC)</li> <li>→ ADS IWG would consider this issue and convey position of ADS IWG to GRVA. (Co-Chair/Canada)</li> </ul> </li> </ol> </li> </ul> </li> </ul>
<p>6. Phase 1</p>	<p>6.1. Scope, purpose, definitions (OPI: Secretary/AAPC)</p> <ul style="list-style-type: none"> <li>➤ AAPC reported on the activities.</li> </ul> <p>6.2. SMS (OPI: Japan)</p> <ul style="list-style-type: none"> <li>➤ Japan introduced the proposed text for SMS subsection.             <ul style="list-style-type: none"> <li>- Sub-section “Production and deployment process” is divided into sub-sections “Production process” and “Post deployment process”.</li> <li>- A new sub-section “Safety assurance process” is added.</li> </ul> </li> <li>➤ Some of the agreed modification to the text. (refer to ADS-04-15-rev.1)             <ul style="list-style-type: none"> <li>- The term “organization” in paragraph 5.5.1. is changed to “manufacturer” for the sake of clarification. This change is to be adopted throughout.</li> <li>- “e.g., ISO standards” seen in paragraph 5.2.2. and elsewhere are meaningful, so they are kept as they are.</li> <li>- “Operational safety” in paragraph 5.7.2. (b) e. (iii) is changed to “SOTIF”. This change is to be adopted throughout.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- “e.g., Human-centered design process” in paragraph 5.7.2.(b) e. (iv) is changed to be “including Human-centered design process”.</li> <li>➤ Other observations:             <ul style="list-style-type: none"> <li>- Some remarks might be necessary so that manufacturers would not have the wrong impression that they only have to comply with Iso standards. (France)</li> <li>- It was agreed to keep references to international standards as examples for now so we don’t lose them. We can take a decision later how to handle references to standards.</li> <li>- UK/Warwick will check the appropriateness of “e.g., ISO 21434” in paragraph 5.5.2. because it might exclusively apply to cyber security.</li> <li>- EC/JRC will check whether paragraph 5.8.5. might be redundant.</li> <li>- Paragraph 5.9.3. is pending because it is not agreed by ISMR OPI members yet.</li> <li>- KPI in paragraph 5.10.1. should be covered by SMS. EC/JRC would amend the text accordingly.</li> </ul> </li> </ul>
	<p>6.3. Process, structure and safety case</p> <ul style="list-style-type: none"> <li>➤ Canada/TC explained the new structure in line with safety case approach. (ADS-04-09)             <ul style="list-style-type: none"> <li>- What are the changes of the structure and their reasons? (Co-chair/USA)                 <ul style="list-style-type: none"> <li>→There used to be no links between requirements and assessment tests. However, under the new structure requirements and assessment tests are linked to each other by the process of safety case. (Canada/TC)</li> </ul> </li> <li>- What impact would the new structure have on OPI ‘s work? (Co-chair/USA)                 <ul style="list-style-type: none"> <li>→More effective assessment would be feasible under the new structure. (Canada/TC)</li> </ul> </li> </ul> </li> <li>➤ Informative presentation “Getting Clarity on Safety Cases - Answering the “What” and “How” within a Regulatory Context” was made by Waymo expert. (ADS-04-16)</li> </ul> <p>6.4. Safety assessment (OPI: Safety assessment, Canada/TC)</p> <ul style="list-style-type: none"> <li>➤ Canada/TC reported on the activities of OPI on Safety assessment.             <ul style="list-style-type: none"> <li>- How long and how many miles would it take to complete safety case process? One example to apply safety case is nuclear power plant and its waste management. Could Technical Services who have less experience and expertise than manufactures tell whether the safety case alleged by the manufacturer is good enough or not? (NL/RDW)</li> <li>- It might be necessary to change the way to proceed. It is not possible to determine pass or fail for every scenario. (Co-chair/Canada)</li> <li>- Is safety case related to product development process? If so, the authority cannot determine whether the safety case is good enough or not. (Japan/MLIT)</li> <li>- Why is it called “safety case”? If safety case is part of SMS, it might not be necessary to change the structure. (Japan/MLIT)                 <ul style="list-style-type: none"> <li>→ Instead, we can say “make the case for safety”. Hope it makes sense. (Co-chair/Canada)</li> </ul> </li> </ul> </li> </ul>

	<p>→ SMS checked by audit covers OEM's management process, whereas safety case checked by the evidence ensures the safety of a product. (SAE)</p> <ul style="list-style-type: none"> <li>- Supports safety case. (Canada, UK, EC/JRC)</li> <li>- Suppose safety case is a feasible approach. However, it would be difficult for OPIs to comprehend safety case and work on the text in line with the new structure. (OICA)</li> <li>- Safety case is proposed by Canada in consultation with OPIs. The structure should be finalized at this session. However, it can be refined as necessary. Safety case is applied to not only aviation but also marine which is closer to land transport. (Co-chair/Canada)</li> <li>- SMS is customized and used. Can safety case specific to a product be customized? (Co-chair/USA)</li> <li>- Can phase 1 (restructure for safety case) and phase 2 (assessment of Safety Case) proposed by Canada be completed in time for Seoul meeting in December? (Co-chair/UK)</li> <li>→ It seems to take more time. (Canada)</li> <li>- Safety case ensures no unreasonable risk. How assessment pillars can be linked by safety case? (EC/JRC)</li> <li>- Would it be possible to decide on a minimum set of testing? (France)</li> <li>- Do you want to decide? (Canada)</li> <li>- The process would vary depending on the test module/volume. (France)</li> </ul> <p>6.5. ADS performance of the DDT (OPI:UK/DfT)</p> <ul style="list-style-type: none"> <li>➤ UK introduced ADS-04-04 "DDT proposals for open items". <ul style="list-style-type: none"> <li>- The manufacturer is accountable for the safe speed stipulated in paragraph 5.2.1.1. (UK/DfT)</li> <li>- 5.2.1.3 – agreement to switch 'aim to' to 'unreasonable'</li> <li>- Remote termination provision - Paragraph 5.2.3.5. is an urgent approach for serious defects of ADS without waiting for recalled vehicles to come. (Japan/MLIT)</li> <li>- Understood as remote kill switch. (Co-chair/USA) Agreement to adopt proposed definition with word 'remotely' inserted. Paragraph 5.2.1.8. is not a duplicate of paragraph 5.2.1.11. in that the former requires ADS not to cause a collision between other road users. (Germany/BMDV, EC/JRC, Japan/MLIT). Agreement to retain provision. Paragraph 5.2.1.13 – adopted as drafted in the meeting</li> <li>- Nominal and critical definitions: carried over to the next session</li> </ul> </li> </ul> <p>6.6. ADS Interactions with users (OPI:ETSC)</p> <ul style="list-style-type: none"> <li>➤ ETSC introduced the proposed text. (ADS-04-03) <ul style="list-style-type: none"> <li>- ETSC will add a diagram to show the process indicated in paragraph 5.3.2.3.</li> <li>- Most of the text reviewed was adopted.</li> </ul> </li> </ul> <p>6.7. ISMR (OPI: EC/JRC)</p> <ul style="list-style-type: none"> <li>➤ EC/JRC reported on activities of OPI on ISMR. (ADS-04-21) <ul style="list-style-type: none"> <li>(1) Paragraph 4.5.1.1. "Objective of the monitoring" is still pending.</li> <li>- Who develops new scenarios? →Manufacturer.</li> </ul> </li> </ul>
--	---

	<ul style="list-style-type: none"> <li>- carried over to the next session.</li> <li>(2) Paragraph 4.5.1.3. “Data from other sources” is still pending.</li> <li>- There seems to be disparity between accessible information in CP’s mind and that of manufacturers’ mind. Accident data are made public but information on victims is not accessible in Canada. (Co-chair/Canada)</li> <li>- carried over to the next session.</li> <li>(3) Paragraph 5.7.3.6. “Notification of occurrences” is still pending.</li> <li>- UK withdrew its proposal to define the notification period for a critical occurrence.</li> <li>- Time limit to report a critical occurrence would depend on how critical the occurrence is.</li> <li>- carried over to the next session.</li> <li>(4) Paragraph 5.7.3.2.2. “ISMR applicability” is generally agreed. There might be changes with the text.</li> <li>- The trigger of 30 seconds prior to the ADS vehicle experiencing the occurrence is necessary to know what happened before the collision. (UK, Canada, Germany, France, SAE)</li> <li>- Provision adopted, noting that some further drafting should be considered acknowledging the work to define different states of an ADS such as ‘active’. Use of the word ‘feature’ may also help.</li> <li>- The question is why 30-seconds duration is chosen. I try to find the reasoning behind the idea. (Co-chair/USA)</li> <li>- Data cannot be collected when the human driver takes control. (OICA)</li> <li>- It is an easy task. I don’t understand why OICA opposes this paragraph. (ITU)</li> <li>(5) Paragraph 5.7.3.1.4. “Occurrence list”</li> <li>- This paragraph is still under discussion by OPI on ISMR. Not ready for discussion by ADS IWG. (EC/JRC)</li> <li>- Two terms “event” and “occurrence” are used to distinguish the hierarchy of the happenings. They are so confusing. (ETSC)</li> <li>- “Event” and “occurrence” has the same meaning in English. (UK/DfT)</li> <li>- The definitions will be reviewed. (EC/JRC)</li> </ul> <p>‘6.8. Virtual testing credibility assessment (OPI: EC/JRC)</p> <ul style="list-style-type: none"> <li>➤ EC/JRC introduced the activities of OPI on Virtual testing credibility assessment. (ADS-04-12-rev.1) <ul style="list-style-type: none"> <li>- Comments on the following outstanding issues are invited. <ul style="list-style-type: none"> <li>(1) Open item 1: Dealing with multiple toolchains)</li> <li>(2) Open item 2: Dealing with tool(s) from another toolchain(s)</li> <li>(3) Open item 3: Level of detail in requirements</li> </ul> </li> <li>- If the requirements are too detailed, they may hinder technological advancement. (Germany/BMDV)</li> <li>- Detailed requirements can be considered at the next stage. (Co-chair/UK)</li> <li>- OPI participants wanted (EC/JRC)</li> </ul> </li> </ul>
--	--

7. phase 2	<p>7.1. Safety assessment (OPI: Canada/TC)</p> <ul style="list-style-type: none"> <li>- If safety case is part of audit, it makes sense. However, if multi-pillar approach in the consolidated Guidelines would be replaced with safety case, the authority cannot judge the sufficiency of safety case alleged by a manufacturer. The manufacturer kind of creates exam questions and solves them by itself. (Japan/NTSEL)</li> <li>→ Safety case shows assessment process not taking a place of multi-pillar approach. (Canada/TC)</li> <li>- Safety case can be applied to normal use-case, but it would be difficult to apply safety case to edge use-case. (Japan/NTSEL)</li> <li>- Have the same concern with Japan. The authority might be embarrassed in front of thousands-page documents. (ETSC)</li> <li>- Safety case is not papers but assessment process. (Canada/TC)</li> <li>- Safety case is a road map including all scenarios. (SAE)</li> <li>- The spirit of safety case is good, but some harmonized judging material is necessary for the authority. (France)</li> <li>- “Steppingstone approach” can be taken under safety case. A feasible level of threshold can be set up at the outset. Then, go on to a higher level as necessary toward the ideal level. In this way the authority in each Contracting Party can take a flexible approach depending on the situation. (Co-chair/Canada)</li> <li>- ADS is so complex that no other approaches than safety case can be seen. (NL/RDW)</li> <li>- Safety case would be the sole way. Let’s set only core requirements in common and let each Contracting Party deal with other requirements. (Co-chair/USA)</li> </ul> <p>Note: Final decision is made on Day 4.</p> <ul style="list-style-type: none"> <li>- Understanding of safety case was deepened through the discussion so far. It doesn’t replace the current requirements but shows the process for assessment. (Japan/MLIT)</li> <li>- There remains a question whether mutual recognition would be feasible or not under safety case approach. Hope that this issue will be considered at GRVA WS on ADS to be held in the following week. (UK/DfT)</li> </ul> <p><b>Conclusion:</b> <u>It was agreed by ADS IWG to take safety case approach. Canada will propose the new structure suitable for this approach. This approach received widespread agreement (Canada, UK, EC, Japan, NL, France, Germany, OICA/CLEPA, SAE, co-chairs)</u></p> <p>7.2. Audit (OPI: Japan)</p> <ul style="list-style-type: none"> <li>➤ Japan introduced the proposed text for Audit sub-section. (ADS-04-11) <ul style="list-style-type: none"> <li>- Structural changes. <ol style="list-style-type: none"> <li>(1) Paragraph 5.3 “Documentation to be provided” is moved to the General requirements subsection.</li> <li>(2) Paragraph 5.9. “Link with ISMR” is moved to ISMR subsection.</li> <li>(3) New paragraph 6.2. “The role of the auditor” is added.</li> </ol> </li> <li>- How to proceed with moving paragraphs 5.3.4. and 5.3.5. to the General requirements subsection? (UK/DfT) <ul style="list-style-type: none"> <li>→ OPI : audit will propose the amended structure and text.</li> </ul> </li> <li>- Integrated ADS Guidelines do not specify the role of assessor. It is necessary for the regulation. To be considered at phase 3. (EC/JRC)</li> </ul> </li> </ul>
------------	--

	<ul style="list-style-type: none"> <li>- The granularity of each subsection should be aligned to some extent. To be checked by Leadership. (EC)</li> </ul> <p>7.3. Testing (OPI: EC/JRC)</p> <ul style="list-style-type: none"> <li>➤ EC/JRC explained the activities of OPI on Testing. (ADS-04-13)             <ul style="list-style-type: none"> <li>- Outstanding issues:                 <ul style="list-style-type: none"> <li>(1) Test environment: Criteria to assess the Simulation toolchain, and other test environment</li> <li>(2) Test methods: Any mandatory test by Authority/Independent party?</li> <li>(3) Scenarios: Catalogue for minimum set of mandatory scenarios?</li> </ul> </li> <li>- The authority only has to judge whether documents submitted by the manufacturer are sufficient or not under safety case approach. Therefore, neither minimum set of mandatory scenarios nor pass/fail criteria might be necessary. (UK/DfT)</li> <li>- OPI to continue working on proposed text for IWG-ADS meeting 5 (S. Korea). OPI participants wanted (EC/JRC)</li> </ul> </li> </ul> <p>7.4. ISMR (OPI: EC/JRC)</p> <ul style="list-style-type: none"> <li>➤ EC/JRC introduced the document “ISMR phase 2” (ADS-04-22)             <ul style="list-style-type: none"> <li>- Will the obligation of the approval authority be stipulated in the regulation? If so, type approval owned by the manufacturer would be revoked by the default of the approval authority. ins’t that unfair? (Japan/MLIT)                 <ul style="list-style-type: none"> <li>→ It is not the obligation of the authority but expectations for the authority. It might not be included in the text of the regulation. (EC/JRC)</li> </ul> </li> <li>- The requirements for manufacturers and assessment methods by the authority should not be mixed up. (Co-chair/Canada)</li> <li>- OPI to work on some text for consideration, including obligations/expectations on the authorities.</li> </ul> </li> </ul>
<p>8. Existing regulations, directives and international standards</p>	<ul style="list-style-type: none"> <li>➤ OPI on standards &amp; regulations/China explained document ADS-04-18.             <ul style="list-style-type: none"> <li>- It was agreed to classify the identified standards &amp; regulations into the following categories.                 <ul style="list-style-type: none"> <li>(1) Those forming the base of GTR, e.g., NATM Guidelines, FRAV Guidelines, Integration Guidelines</li> <li>(2) Those referenced by GTR</li> <li>(3) Other</li> </ul> </li> </ul> </li> </ul>
<p>10. Future ADS IWG meetings</p>	<ul style="list-style-type: none"> <li>➤ #5 ADS Seoul session: December 9-13, 2024             <ul style="list-style-type: none"> <li>- Day 1: Starts at 10:00 (to be confirmed)</li> <li>- Day 2 - Day 5: Starts earlier.</li> <li>- The session adjourns at noon on Day 5</li> <li>- No meetings for GRVA WS on ADS are planned in the Seoul session.</li> </ul> </li> <li>➤ #7 ADS Tokyo session: April 14-18, 2025             <ul style="list-style-type: none"> <li>- Symposium is planned on April 18 (Friday)</li> <li>- Detailed information will be provided at Seoul session.</li> </ul> </li> </ul>