

# JOINT AUTHORITIES FOR RULEMAKING OF UNMANNED SYSTEMS



Joint Authorities for Rulemaking of Unmanned Systems

# JARUS MEMBERS

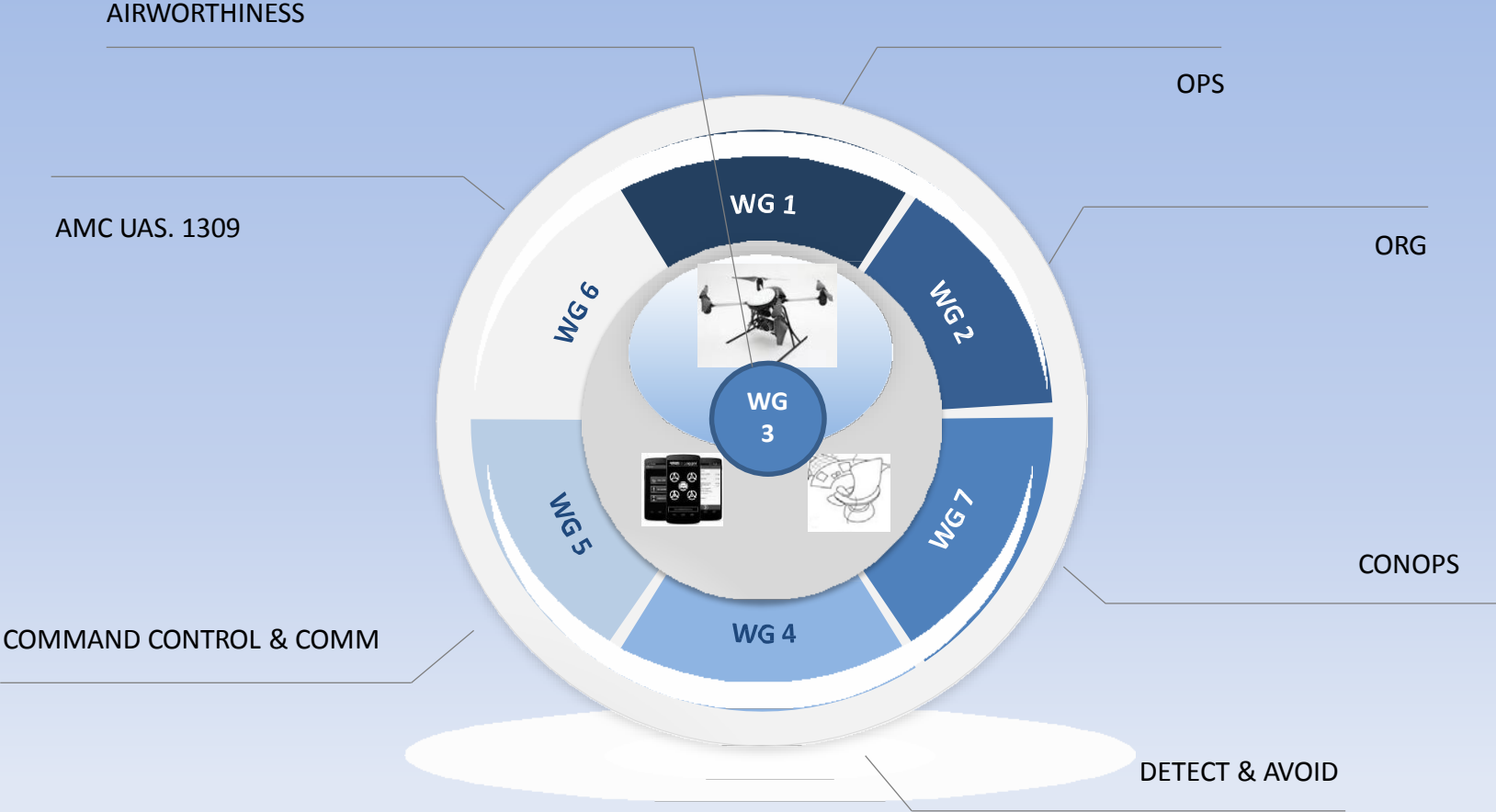
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Australia  
Austria  
Belgium  
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Canada  
Czech Republic  
Colombia  
Denmark  
EASA  
Eurocontrol  
Estonia  
Finland  
France  
Germany  
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Macedonia  
Romania  
Russia  
South Africa  
Spain  
Sweden  
Switzerland  
United States of America



# WORKING GROUPS STRUCTURE



# JARUS Airworthiness Working Group

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**1** Brazil, South Africa, Russia, Italy, Spain, UK, Netherlands, Switzerland and EASA participating

**2** Chair, Vladimir Shibaev, Co-chair Markus Farner

- 3** Establish certification specification for:
- a. Light Unmanned Rotorcraft System (CS-LURS);
  - b. Light Unmanned Aeroplane System (CS-LUAS);
  - c. "Part 21" Airworthiness approval processes
  - c. Very Light UAS (VL UAS);
  - d. Airships, free/tethered balloons.

## DIFFICULTIES / CHALLENGE

CS-VLA / CS-VLR applicable for conventional design only



## DIFFICULTIES / CHALLENGE

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RPAS contains new Systems, unusual or not installed on manned aircrafts



RPAS requires new Certification Specifications



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# CS-LURS

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<b>CONTENT</b>
<b>SUBPART A GENERAL</b>
<b>SUBPART B FLIGHT</b>
<b>SUBPART C STRENGTH REQUIREMENTS</b>
<b>SUBPART D DESIGN AND CONSTRUCTION</b>
<b>SUBPART E POWERPLANT</b>
<b>SUBPART F EQUIPMENT</b>
<b>SUBPART G OPERATING LIMITATIONS AND INFORMATION</b>
<b>SUBPART H Reserved for Detect and Avoid</b>
<b>SUBPART I CONTROL STATION</b>
<b>Appendix A INSTRUCTIONS FOR CONTINUED AIRWORTHINESS</b>
<b>Appendix B ENGINES</b>
<b>Appendix C INTERACTION OF SYSTEMS AND STRUCTURES</b>
<b>Appendix D HIRF ENVIRONMENTS AND EQUIPMENT HIRF TEST LEVELS</b>



# CS LURS Applicability

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**1** Light Unmanned Rotorcraft Systems

**2** MTOW not exceeding 750 kg

**3** Visual Line of Sight Operations (VLOS)

**4** Excludes human transport and flight into known icing conditions



## **STATUS CS-LURS Issue 2**

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**CS-LURS Issue 1 in use. We know it is not perfect**

**Please provide comments to improve CS-LURS**

**From CS-LUAS already open items for CS-LURS Issue 2**

**Start working after finishing CS-LUAS**



## ONGOING CERTIFICATION ACCORDING CS-LURS

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**YAMAHA RMAX**



**SCHIEBEL S-100**



# Questions ?



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