Light RPAS: The European Approach
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President of UVS International
Standing Advisor to EUROCAE WG93

On request of ICAO, the terms Remotely Piloted Aircraft (RPA) & Remotely Piloted Aircraft Systems (RPAS) are used in this presentation [instead of Unmanned Aircraft (UA) & Unmanned Aircraft System (UAS)].
On 2 March 2011 the speaker made a proposal for consideration by the members of EUROCAE WG73 SG4 on Light UAS.

This proposal concerned the constitution of a totally new Working Group (WG) within EUROCAE to tackle the creation of advisory documents relative to the operation of Light RPAS (MTOW < 150) within the European Union.

It was proposed to constitute the new Working Group on Light RPAS within EUROCAE, and that it would function independently from WG73.

The proposed structure & working methodology of the WG on Light RPA was specifically adapted to accommodate Small & Medium-Sized Enterprises (SMEs), which form the backbone of the Small RPA community.

It was recognised that a dual directional information flow between the new WG on Light RPAS and WG73 would be in the interest of both groups, and that WG73 should be included in the comment process.

In December 2011 the EUROCAE Council agreed to constitute WG93 on Light RPAS - Its kick-off meeting will take place on 23&24 May 2012.
Presentation Outline

- EC DG MOVE
  (Hearing, Survey, Petition)
- The Current Situation
- Why a NEW Sub-Group?
- Small RPAS Specificities
- Small RPAS Segmentation
- International Coordination Council (ICC)

Background Information

WG93 on Light RPAS

- Objectives
- Structure
- Leadership
- Areas of Work
- Work Packages
- Process & Customers
- Work Methodology
- Qualified Entity
- Information Flow

18-20 April 2012
Small RPA are already used by a significant number of governmental authorities.

A minima European regulation could speed up the emergence of the market, as the routine deployment of RPA is hampered by a lack of Euro regulatory rules.

Most non-military Small RPA operations are currently conducted at flight altitudes below 150 m above ground level.

Common European standards should allow trans-border cooperation between authorities, multi-lateral operations, and the transfer of systems & flight crews from one country to another.

A single set of rules pertaining to Small RPA for Europe would favour the creation of an open & fair European market for these systems.

Due to the specific characteristics of Small RPA & the large number of SMEs involved, the Small RPA community should be recognised as a separate stakeholder group.

The entire Small RPA Hearing report issued by EC DG MOVE can be found on the DG MOVE web site & in the 2010 edition of the UAS Yearbook (see www.uvs-info.com)
- The current situation calls for specific rules for Light RPAS, which are in
equation with currently applicable rules for manned aviation, but putting the
lowest possible constraints on manufacturers & users of Small RPA.

- The possibility of launching a call for a funded study & technology
demonstration re: detect & avoid for Light RPA should be investigated.

- It was considered necessary to develop national legislation, based on
consensually agreed criteria, in all European Union countries.

- It is necessary to harmonise rules for Light RPAS certification & operations
within the European Union countries, but also in all countries having
bilateral or multilateral agreements with Europe in the field of aviation.

- Europe should produce draft airworthiness, operational and airspace
requirements (taking existing standards & best practices into account) that
is to be applied on a voluntary basis by national aviation authorities.

- The Light RPAS community, recognised as a separate stakeholder group,
should benefit from ad hoc working arrangements clearly separated from the
activities conducted for other RPA segments (e.g. MALE & HALE).
At the Hearing on Light RPAS organised by EC DG MOVE, UVS International remitted a worldwide survey on the non-military applications of Light RPA.

This survey referenced the European Light RPAS community as follows:
- Flight Service Provider - Flight Service Customer - Government Entity
- Govmt Research - Government RPA Operator - Industry
- International Assn. - National Association - Multi-National WG
- Regulatory Authority - Regulatory Service Provider - Standards Org.
- SMEs & SMIIs - University - UAS Test & Evaluation

This survey clearly:
- Illustrated that the **vast majority of manufacturers of Light RPAS are SMEs**.
- Identified the **non-military RPAS operations currently taking place**.
- Brought to light that the **vast majority of current non-military RPA operations were performed by Light RPA**.
- Highlighted the **societal benefits** supplied by Light RPA.
- Brought the **European Light RPA community** (manufacturers & users) into scope.
In December 2010, UVS International submitted a petition to the European Commission. The originals were sent to Daniel Calleja at DG MOVE. Copies of the petition, including the annexes, were sent to Siim Kallas (Vice-president of the EC), Antonio Tajani (Vice-president of the EC) & Luc Tytgat (DG MOVE).

This petition was signed by 112 organizations and 1 multi-national governmental working group, originating in total from 25 countries:

20 European countries: Austria, Belgium, Cyprus, Czech Rep., Denmark, Finland, France, Germany, Greece, Italy, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, United Kingdom;

5 Non-European countries: Brazil, Canada, Israel, Russian Fed., USA.

The petition signatories represented: 5 government orgs., 10 industry, 6 institutions, 2 international associations, 5 national associations, 67 SMEs, 17 academic institutions.

The 112 signatory organizations represented a total of 2046 companies & organizations.
UVS International's cover letter mentioned the following:

“We are confident that the attached documents will contribute to motivating the European Commission to:

- Recognise the strategy value of the UAS-related technologies for Europe;
- Recognise the importance of the societal benefits that UAS can bring to Europe;
- Play an active role to enable the early insertion of UAS into non-segregated airspace and thereby open up the European UAS market;
- Provide the European UAS community with the necessary support, which will permit it to position itself favourably in an international context.”

In his response to the petition Siim Kallas indicated the following:

“In your letter you specify four areas for which you indicate that a European Commission lead would be beneficial, and I would like to state that I fully share your views.”
Classification & Identification

All UAS airframe types & all sizes

Application Classes

<table>
<thead>
<tr>
<th>Application Classes</th>
<th>Nr of Application Categories &amp; Sub-Categories</th>
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<tbody>
<tr>
<td>Security Related</td>
<td>39</td>
</tr>
<tr>
<td>Safety Related</td>
<td>35</td>
</tr>
<tr>
<td>Science &amp; Research Related</td>
<td>31</td>
</tr>
<tr>
<td>Contractor-Supplied Flight Services</td>
<td>38</td>
</tr>
<tr>
<td>Civil/Military Coordination (Mutualisation)</td>
<td>34</td>
</tr>
</tbody>
</table>

Based on existing reports & studies & discussions with current & potential users
Security-Related [39 application (sub-)categories]

- Anti-looting control (post riot)
- Anti-poaching control
- Border surveillance
- Crime scene (surveillance, recording, situational awareness)
- Criminal car tracking
- Crowd surveillance
- Hostile protest control
- Illegal immigrant & human trafficking control (local, regional, national)
- Illegal activity control (dumping & waste burning, historic site & heritage looting, drug cultivation, excavation, logging, illegal mining, ship bilge venting)
- International summit surveillance
- Maritime surveillance (regional area, sea lane, wide area)
- Police applications (various)
- Riot control
- Smuggling control
- Surveillance of public gatherings (pop concerts, sporting events)
- Urban law enforcement
- Wildlife crime control
Safety-Related [35 application (sub-)categories]

Avalanche survivor search
Emergency communications network (incl. relay) (local, regional, national, EU)
Fire scene inspection (pre-fire, during fire, post fire)
Fishery control
Forest Fire fighting (detection, monitoring, support)
Iceberg monitoring
Disaster site monitoring & mapping (earthquake, floods, icing rain storms, landslide, mud slide, plane crashes, ship collisions, storm & hurricane, train crashes, tsunami & tidal surge, volcano eruption)
Nuclear accident monitoring (contamination measurement, contamination tracking & monitoring)
Post-disaster relief operations
Search for missing persons
Volcanic ash cloud (analysis, measurement, tracking & monitoring)
Other

Dike monitoring
Maritime search & rescue
Road & highway traffic monitoring
Scientific & Research-Related [31 application (sub-)categories]

Aerial photogrammetry
Agricultural (crop monitoring & management, plant growth vigour mapping)
Algae proliferation detection
Arctic research
Atmospheric monitoring
Coastal mapping
Environmental monitoring
Geophysical survey
Hurricane tracking
Invasive species identification/analysis
Meteorological research
Ozone measurements
Sand bank shift measurements/mapping
Tidal zone mapping
Volcano monitoring
Wildlife census

Archaeological site mapping
ATM Research
Climate monitoring
Coastal zone studies
Forestry management & research
Glacier & ice cap monitoring
Iceberg monitoring
Marine mammal monitoring
Ocean & sea research support
Salt water infiltration detection
Sea ice monitoring
Vegetation identification
UAS sensor research
Other

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Contractor Supplied Flight Services [38 application (sub-)categories]

Advertising (lighter-than-air UAS) (indoor, outdoor)
Aerial photography
Aerial news broadcasting
Agricultural (EU Common Agricultural Policy control, crop monitoring & management, fertilizer dispensing, hydrometric mapping, insecticide spraying, monitoring for selective harvesting, plant growth vigour mapping)
Bird (strike) control
Cargo transport (small - large)
Cinema (aerial shots & special effects)
Forestry (tree growth & illness monitoring)
Inspection, monitoring, surveying, mapping [aerial terrain mapping (urban environment, non-urban environment, industrial site), critical infrastructure inspection, dike inspection, forest fire operations support, gas burn-off funnel tip inspection, geophysical survey, historical monument inspection, illegal crop cultivation detection, magnetic field survey (mineral search), magnetic mapping, oil & gas pipeline inspection, photogrammetry, power cable inspection, radiation measurement & monitoring, railway track bed inspection, thermal isolation analysis, wind turbine blade inspection]
Test bed (testing, validation, qualification of sensors, avionics, S&A, ATM, etc)
Other
Civil/Military Cooperation – Mutualisation

**Mutualisation** = The operation of military UAS assets by the military for non-military governmental applications.

Basic advantages of mutualisation:

- Offers the military additional UAS flight training opportunities;
- Supplies added value to military flight training exercises;
- Permits to increase the return on investment for military UAS by using them for non-military governmental missions with societal benefits (incl. European external border surveillance);
- Gives non-military governmental authorities access to capabilities they may not be able to afford otherwise and thereby increases national security & safety;
- Allows to spread the cost of such UAS missions over various government organisations;
- Can contribute to familiarizing non-military governmental organisations with the use and advantages of UAS.
Civil/Military Cooperation – Mutualisation
[34 application (sub-)categories]

Anti-piracy operations
Coastal surveillance
Emergency communications network (incl. relay): (local, regional, national, EU)
Fishery control
Illegal drug cultivation detection
Illegal ship bilge venting detection
International summit surveillance
Maritime search & rescue
Natural disaster site monitoring

Border surveillance
Critical infrastructure surveillance
Forest fire fighting (detection, monitoring, support)
Illegal immigrant control (local, regional, national, EU)
Maritime surveillance
(earthquake, floods, icing rain storms, landslide, mud slide, plane crashes, ship collisions, storm & hurricane, train crashes, tsunami & tidal surge, volcano eruption)

Sea lane surveillance
Surveillance of large sporting events

Surveillance of public gatherings
Other
EUROCAE WG73 SG4 on Light UAS was not really representative of the European Light RPAS community:

- Insufficient number of relevant stakeholder groups were represented;
- Insufficient number of active participants (producers & operators);
- Some countries (BE, DE, ES, FR, IT, NL, NO, SE, UK) not adequately represented.

The work methodology was not adapted:

- The standard EUROCAE work methodology was not designed for SMEs;
- The applicable EUROCAE process & procedures were not geared for SMEs (most of which are not & cannot afford to be a member of EUROCAE);
- The EUROCAE WG73 SG4 decision/comment process involved companies with no major stake/expertise in Light RPAS and it was too slow;
- The requirement for guidance documents and standards for Light RPAS is much more urgent than for UAS with a MTOM > 150 kg;
- The end product is for national civil aviation authorities (not EASA).
Light RPAS are principally produced & operated by SMEs.
There are many more SMEs producing Light RPAS, than large companies producing large RPA (MTOW >150 kg).
According to the EC, SMEs are very significant technology innovators and come up with more cost-effective solutions with cross-over potential.
SMEs have limited financial & personnel resources, and little time for activities that are not immediately productive.
There is a significant potential market with societal benefits for non-military Light RPAS, which is much larger than for large RPA (MTOW > 150 kg).
A significant number of existing non-military RPAS are market-ready today.
If the Light RPAS market is not opened up rapidly, the currently involved SMEs risk becoming discouraged and investing their talents elsewhere.
Aerial work using Light RPAS will be the core of a totally new service industry.
A significant number of national civil aviation authorities have recognised the aforementioned & are endeavouring to accommodate Light RPAS.
National civil aviation authorities have federated under the banner of JARUS in order to harmonize their approaches to solving the Light RPAS problem.

A successful incremental approach to permitting Light RPAS operations would have benefits for the large UAS community (not the other way around).

The European Commission has recognised all the aforementioned and has recognised Light RPAS as a separate aviation stakeholder.

The European Commission has recognised that SMEs are significant technology innovators & create more jobs than large industrial companies.

In Europe Light RPA are regulated by national CAAs (NOT EASA).

Light RPAS are not (yet) dealt with by ICAO.

Detect & Avoid technologies developed for Light RPAS may have significant applications for general aviation.

Valid business cases can be made for the use of Light RPAS.
### Light RPA

**Class I**  
- **Fixed Wing**  
- **Rotary Wing**  
- **Lighter-than-Air**

<table>
<thead>
<tr>
<th>Group</th>
<th>MTOM</th>
<th>Flight Alt.</th>
<th>Height from Pilot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>MTOM &lt;1,5/2 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grp A</td>
<td>MTOM &gt; 1,5/2 kg &amp; &lt; 7 kg</td>
<td>&lt; 150 m AGL</td>
<td>&lt; 500 m from pilot</td>
</tr>
<tr>
<td>Grp B</td>
<td>MTOM &gt; 7 kg &amp; &lt; 25 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grp C</td>
<td>MTOM &gt; 25 kg &amp; &lt; 150 kg</td>
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</tbody>
</table>

**Class II**  
- **Fixed Wing**  
- **Rotary Wing**  
- **Lighter-than-Air**

<table>
<thead>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Grp C</td>
<td>MTOM &gt; 25 kg &amp; &lt; 150 kg</td>
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</table>

**RPA**

<table>
<thead>
<tr>
<th>MTOM &gt; 150 kg</th>
<th>Flight Alt. &gt; 150 AGL</th>
<th>&gt; 500 m from pilot</th>
<th>Visual LOS &amp; BLOS</th>
</tr>
</thead>
</table>

**Light RPAS Segmentation**

**Regulated by National CAAs**

**National Operating Rules & EASA Certification**

- MTOM = Maximum Take Off Mass  
- AGL = Above Ground Level  
- LOS = Line of sight  
- Extended VLOS = Using a forward-placed observer  

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Class I
All Groups
- Visual LOS flight altitude control
- Visual LOS flight path control
- Outside of ATC
- Flight altitude: < 150m/400 ft AGL
- Max. flight dist.: < 500m from pilot
- Confined airspace
- Daytime VMC (visual meteorological conditions)
- Extended VLOS flight alt. control
- Extended VLOS flight path control

Class II
All Groups
Flight beyond visual LOS
and
Coordination with ATC
and
Rules of the Air apply
and
Which do not fall under Light RPA Class I definition

Topics to be dealt with
- Operational approval including:
  - Proof of safe flight
  - Approved documentation
  - RPA Pilot Training & Licensing
  - RPA Operator Certificate
  - Limitations, etc
  - Occurrence reporting mandatory

Light RPA
MTOM <150 kg
Regulated by National CAAs

Light RPAS Segmentation
PAN EUROPEAN APPROACH

Light RPAS

MTOM <150 kg

Regulated by National CAAs

Topics to be dealt with
- Full set of regulations
  - AOC - Aircraft Operators Certificate
  - Registration
  - Certification of Airworthiness
  - Licensed pilot
  - Type certification
  - Maintenance Part 66 & 145
  - Approval of Design Org, & Production Org, or demonstration of capability
**Light RPA Class I = The Priority**

- Visual LOS flight altitude control
- Visual LOS flight path control
- Outside of ATC (air traffic control)
- Flight altitude: < 150m/400 ft AGL
- Max. flight dist.: < 500m from pilot
- Confined airspace
- Daytime VMC (visual meteorological conditions)

**Topics to be dealt with**
- Operational approval including:
  - Proof of safe flight
  - Approved documentation
  - RPA Pilot Training & Licensing
  - RPA Operator Licensing
  - Limitations, etc
  - Occurrence reporting mandatory

**MTOM**
- Micro: MTOM < 1.5/2 kg
- Grp A: MTOM > 1.5/2 kg & < 7 kg
- Grp B: MTOM > 7 kg & < 25 kg
- Grp C: MTOM > 25 kg & < 150 kg

**Flight In Visual LOS**
- Flight Altitude: < 500 m from pilot
- < 150 m Above Ground Level

**Light RPA Class I offers significant international market potential**

**Minimal impact on Air Traffic Management (ATM)**

**Will permit confidence building with regulatory authorities**
The international Light RPAS (<150 kg) community principally consists of Small & Medium Sized Enterprises (SMEs) (producers & operators) which:
- Are NOT a member of a standards organization (e.g. EUROCAE, RTCA);
- Have financial, personnel & time constraints;
- In many cases, do not have English as their mother language.

General Objectives
- Increase international awareness of Light RPAS-related matters;
- Give national & multi-national associations and working groups the possibility to make their voices heard globally;
- Increase the dual-directional flow of information regarding regulatory matters between all ICC members;
- Be instrumental to organize and supply national inputs to international working groups, or other Light RPAS-related international efforts.

Focus
Advisory & standards work relative to Light RPAS (<150 kg).

Coordination
The start-up of the ICC by UVS International was coordinated with:
- the SG of EUROCAE & chairman of EUROCAE WG73 SG4 on Light UAS;
- the chairman & members of JARUS.
- Open to the international Light RPAS community (manufacturers & operators) through their national associations & working groups;
  - No single organization dominates;
  - Increase the flow of information to all;
  - Promote international coordination, cooperation & understanding.

- Very few companies involved with Light RPAS are EUROCAE members;
- Permit the international Light RPAS community to contribute in a significant way to the standards work;
- Create a structure & methodology permitting SMEs to contribute without over-stressing their financial, personnel & time limitations;
- Permit national groups to elaborate their contributions in their national language & supply national opinion papers in English.
- “Federate” & create synergies between ongoing national initiatives (AU, BR, CA, CZ, DE, DK, ES, FI, FR, IE, IT, NL, NO, RO, SE, UK) at working level.

- National position papers are harmonized in WG93 working meetings;
- ICC member organisations delegate one or more representatives to participate in these plenary working meetings.
National associations & working groups in 17 countries (14 languages).

Their members tackle the Light RPAS work packages in their national languages & produce a final national position paper in English.

<table>
<thead>
<tr>
<th>Member Orgs.</th>
<th>National associations &amp; working groups in 17 countries (14 languages).</th>
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<tbody>
<tr>
<td>Australian UAS Academy</td>
<td>Ass</td>
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<tr>
<td>AVBS</td>
<td>Ass</td>
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<tr>
<td>BE UAS</td>
<td>Ass</td>
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<td>DK UAS</td>
<td>WG</td>
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<tr>
<td>European Air Sports</td>
<td>Ass</td>
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<tr>
<td>FI UAS</td>
<td>WG</td>
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<tr>
<td>IT UAS</td>
<td>WG</td>
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<tr>
<td>NL UAS (NVvL)</td>
<td>WG</td>
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<tr>
<td>RCAPA</td>
<td>Ass</td>
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<tr>
<td>RU UAS</td>
<td>WG</td>
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<td>UAS Austria</td>
<td>WG</td>
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<td>UAS Brazil</td>
<td>Ass</td>
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<td>UAS Norway</td>
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<td>UAV-DACH</td>
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<td>UAVS</td>
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<td>Unmanned Systems Canada</td>
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<td>UVS France</td>
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<tr>
<td>UVS International</td>
<td>Ass</td>
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Focus 1 – Light RPAS Safety Assessment

SAFETY REQUIREMENTS
- Safety Assumptions
- Management
- Operations
- System Description
- Safety Performance
- Developments
- Managed Evolution
- Safety Case Control
- Assurance of Compliance
- Acceptability of Safety Performance

FLIGHT OPERATIONS
- Concept of Operations
- Flight Trials
- Flight Trial Objective
- Flight Demonstration
- Flight Demonstration Objective
- Generic Risk Assessment
- C3 Protection

SYSTEM DESCRIPTION & SAFETY ASSESSMENT
- L-RPAS Design & Description
- L-RPAS Guidance & Control System
- L-RPAS Crew
- Remote Pilot Station
- Communication Systems
- Additional Remote Pilot Stations
- Telemetry System
- Launch & Recovery Systems
- Main Hazards & Mitigation

SAFETY PROCEDURES
- Incident Handling
- Safety Surveys, etc

ORGANISATIONAL APPROVAL
- Design
- Production
- Maintenance

SAFETY MANAGEMENT
- Safety Policy
- Safety Organisation
- Emergency & Incident Procedures
- Flight Operations Risk Assessment
- Flight Operations & Application Process

Focus 1 – Light RPAS Safety Assessment
NR & SCOPE OF LICENCES
- Licence requirements and possibilities
- Competency level
- Medical Policy
- Training & currency requirements

TRAINING ORGANISATION APPROVAL
- “Public” or Private Company Training Org.
- Differentiate between licence levels
- Facilities
- Availability of training systems

FLIGHT ASSESSMENT
- Synthetic Training
- Flight Envelope
- Asset Management
- Methods of Command & Control
- Navigation
- Radio & ATC Communications
- Crew Management
- Emergency Procedures
- Ground Handling
- Launch & Recovery
- Departure & Arrival
- Maintenance & Support
- Mission Systems
- Investigation Procedures

SCHOOL CURRICULUM
Determine knowledge level:
- Air Law
- Aircraft General Knowledge
- Flight Performance & Planning
- Human Performance & Limitations
- Meteorology
- Navigation & Communications
- Operational Procedures
- Principles of Flight
- Communications (data link & internat. radio license)

EXAMINATION
- Examiner requirements
- Examination conditions
**Focus 3 – Light RPAS Operator Certificate**

**ADMINISTRATION**
- Basic Concepts
- Legal Requirements
- Organisational Requirements
- Appointments & Responsibilities
- Accident & Incident Reporting
- Investigation Monitoring

**FLIGHT PLANNING**
- Basic Concepts
- Small RPA Performance
- Operational Planning & Briefing
- Equipment & Payload Carriage
- Extreme Weather Operations
- Navigation
- Communications
- Aerodromes, Launching & Landing Sites
- Night Flying
- Flight Time & Duty Hours
- Documentation

**FLIGHT OPERATIONS**
- ATC Reporting
- Visual FR & Instrument FR
- VLOS, ELOS, BLOS, BRLOS Operations
- LOS Communications
- Satellite Navigation
- BLOS (Relay) Communications
- Operating & Weather Minima
- FIR / International Transit
- High Altitude
- Low / Ground Level
- Long Duration (days, weeks, months)

**APPLICATION SPECIFICS**
- Aerial Imagery (photography, video, photogrammetry)
- Aerial Sensing (scientific & research)
- Utilities (oil, gas, power lines, communications)
- Emergency Services (police, fire brigade)
- Security Services
- Urban Operations
- Disaster Management

**CATEGORISATION OF OPERATIONS**
Light RPAS VLOS Operations & BLOS Scenario Capture

**Work Packages:**

01 Scenarios for VLOS Operations
02 Command, Control & Communication
03 L-RPA Visibility Characterization
04 Airworthiness
05 DOA POA Maintenance Organization
06 Qualified Entities
07 RPA Flight Crew Licensing & Training
08 Operator Approval
09 Data Collection
10 Guidance for Obtaining Approval
11 SRPA Classification
12 Generic Safety Assessment
13 BLOS Scenario Capture

**Work Methodology**

All the required work will be done online on a dedicated & restricted access “share-point” collaborative web site.
Proposed Work Methodology - I

Call for Participation

A call for participation will be sent out shortly to:
- All ICC member organisations;
- All identified individual companies & organisations that could be interested.

The call for participation will include a clear description of the proposed objectives & structure & work methodology of the Working Group.

Declaration of Participation

All interested parties will be invited to:
- Indicate the work packages they want to be “actively” or “passively” involved in;
- supply their contact details;
by means of the Declaration of Participation Form (see “WG93 on Light RPAS” tab in main menu bar on www.uvs-info.com).

Active members: Provide information, take part in the discussions analysing & formulating documents for inclusion in the deliverables for the work packages, and will have access to the share-point web site & will receive the Share-Point User Guide.

Observers: Can monitor & comment the outputs, but will not participate in the work and will not have access to the work section of the share-point web site.

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A National Qualified Entity will be entrusted with the implementation of the Light RPAS safety case analysis, pilot licensing & operator certification by delegation by the relevant national aviation authority.

**JARUS** will be requested to come forward, in coordination with its members, with a proposal describing:
- The definition of a National Qualified Entity;
- The criteria that a National Qualified Entity is to comply with;
- The role a National Qualified Entity is to play & how;
- The relationship between the National Qualified Entity & national aviation authority.

Based on the proposal received from J ARUS, WG93 on Light RPAS will make its final proposal in the form of a WG93 Final Document.
WG93 on Light RPAS
Inputs, Comments & Information Flow

WORKING GROUP 93 on Light RPAS

Australia, Austria, Belgium, Brazil, Canada, Czech Rep., Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Spain, UK, Europe Air Sports, Minimal Risk UAS WG, RCAPA

UVS International’s ICC Community Inputs

Individual Companies & Organisations (Eurocae Mbrs)

JARUS

CAAs: Australia, Austria, Belgium, Brazil, Canada, Colombia, Czech Rep., Denmark, EASA, EUROCONTROL, France, Germany, Ireland, Israel, Italy, Malta, Netherlands, Norway, Russian Fed., South Africa, Spain, Switzerland, UK

If ICAO receives requested state-delegated personnel

NATIONAL CIVIL AVIATION AUTHORITIES

If ICAO

National Implementation

EASA

EUROCONTROL

European Defence Agency

EU Nat. Military Authorities

SESAR JU

NATO

SAE International

RTCA SC203

ASTM

WG73

European Commission - DG MOVE

European Commission - DG ENTR

ICS – International Civil Aviation Org.

18-20 April 2012

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See “WG93 on Light RPAS” Tab in the Main Menu Bar
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