RPAS - EASA update

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The Agency is competent for drones with an MTOM above 150 kg (annex II (i)) that are not used for:

- Military, customs, police, search and rescue, firefighting, coastguard or similar activity or services (article 2 basic regulation)
- Specifically designed or modified for research, experimental or scientific purpose to be produced in very limited numbers

Interim solution (Policy E.Y013-01):

- Used by the Agency's staff when certificating UAS.
- A first step in the development of comprehensive civil UAS regulation
- May be regarded as providing guidance to Part-21
Industrial and Societal context

- Fast developing activity in particular small UAS with multiple applications: In EASA countries:
  - 2495 operators, 114 RPAS manufacturers. Very small to small RPAS with a maximum take-off mass below 150kg.
  - 16 Countries have national rules, 11 are preparing rules but they are not harmonised.
- Wide range of machines from micro RPAS to High Altitude Long Endurance, rotorcraft, airships.
- Use of new technologies (e.g. high level of automation, sense and avoid, electrical propulsion, unusual configurations, cooperative operations).
- Quite often developed by SME and universities.
- Adapted regulations to be developed in an international context (JARUS/ICAO).
- Technology may have spin-off for other aviation applications notably GA.
- Public generally favourable to drones however concerns about safety, security and privacy.
Recent decisions in Europe (I)

Commission communication 407/2014

- Performance based approach
- Use of JARUS
- Role of EASA
Recent decisions in Europe (II)

Conclusions of the EU Council of Transport Ministers on:

1. **overall objective of integration of RPAS into the aviation system;**
   - consensus that RPAS need to be integrated in the European airspace

2. **substance of the future regulation and how to keep rules proportionate to risk; and**
   - All interventions favoured a common level playing field with harmonized rules

3. **safety, security, privacy and data protection challenges.**
   - concerns of citizens with regard to these issues are very important – but can be managed within the existing regulatory framework at the national level
Recent decisions in Europe (III)

- General mandate to EASA
  - Draft Impact Assessment on RPAS integration
  - Draft amendments to the Basic regulation in order to enable future specific rulemaking on RPAS
  - EASA to develop a Concept of Operations reflecting a proportionate and risk based approach to regulation
Recent decisions in Europe (IV)

Outline of Riga Summit

- Drones need to be treated as a new type of aircraft with proportionate rules based on the risk of each operation
- EU rules need to be developed now
- Technologies and standards to be developed for full integration in European Airspace
- Public acceptance is key to the growth of drones services
- The operator of a drone is responsible for its use
The EASA Concept of Operations - General

- Regulatory concept: proportionate, progressive, risk based, high level rules complemented by Industry Standards
- Operations centric
- EU rules to cover all drones; implementation depends of the level of risk
- Commercial and non-commercial treated in the same manner
- 3 categories: OPEN, SPECIFIC and CERTIFIED
**OPEN:**
- Low risk
- Without involvement of Aviation Authority
- Limitations (Visual line of sight, Maximum Altitude, distance from airport and sensitive zones)
- Flight over Populated area is possible if:
  - No overflying of crowds
  - Industry standards (Case of toy of less than 500g)

**SPECIFIC**
- Increased risk
- Safety risk assessment
- Approved by NAA possibly supported by Qualified Entities unless approved operator with privilege
- Operation Authorisation with operations manual
- Concept of accredited body
- Airworthiness of drone and competence of staff based on risk assessment

**CERTIFIED**
- Comparable to manned aviation
- Limit between specific and certified is not yet defined
- Pending criteria is defined, EASA accept application in its present remit
- TC, C of A, Noise certificate, Approved Organisations, licences (Case of small drones)
- Command and Control and Detect &Avoid can receive an independent approval
Concept of Operations - Operator Authorisation

Operator

Simplest Operation

Operation w/o specific Authorisation

NAA Risk Assessment

ROC Risk Assessment

Manufacturer

EASA Certification

EASA TC or ETSO(?) Approval

Qualification according ConOPS Categorisation

Operator Authorisation with specific limitations

EASA-RPAS update
Organisation of work - General


JARUS Standards → EASA RPAS – Safety Objectives Part21, Part FCL, CS-XX Book1 → EASA BR Essential Requirements → Standard Bodies
Organisation of work - JARUS Organisation

- Chairmanship/ Vice Chairmanship: EASA/FAA
- Secretariat provided by EUROCONTROL and FAA
- JARUS working groups:
  - WG 1: Licencing and OPS: JARUS-FCL in preparation
  - WG 2: Organisations: group is reviewing comments received
  - WG 3: Airworthiness: CS-LURS published
  - WG 4: Detect and Avoid
  - WG 5: Command and Control: CPDLC was consulted this summer
  - WG 6: AMC 1309: consultation led to many comments
  - WG 7: Categorisation/ proportionality: proposals for classification of RPAS expected by Q1/15
**Scope:**
- Better organize and synchronize the efforts in Europe regarding the implementation of the Concept of operations and overall RPAS integration

**Present membership:**
- EC (MOVE and GROWTH), EUROCONTROL, EASA, JARUS, SESAR, EDA, EUROCAE, Industry, UVS
Challenges

- Re-focus JARUS and organise Industry and Military participation in JARUS
- Availability of budget and resources
- Need to obtain buy in from all involved parties
- Strong expectations from stakeholders and applicants
- New problems like privacy, cyber-security, enforcement, data from military partners, ...
Action Plan for EASA

- Draft text for the Basic regulation
- Draft impact assessment
- Stakeholder consultations in June 2015
  - Regulatory Framework: based on paper concept of operation and including reporting scheme, identification and “geo-fencing”.
  - Concrete regulatory measures for low risk operations (Open category), based on best practices from Member States.
- Propose a position to the Commission in December 2015
  - Regulatory framework
  - Concrete regulatory measures for low risk operation
- Observatory
- Engage in JARUS and ICAO
- Coordination with FAA
2 applications are being handled now (one fixed wing, one rotorcraft), 6 in the pipeline

Using the Policy E.Y013-01

Approach will evolve with implementation of the Concept of Operations
Roadmap

- **03/2015**
  - ICAO symposium
  - Update internal planning
  - Prepare EU/US conference

- **04/2015**
  - Draft Basic Regulation
  - Attend JARUS plenary
  - Define cooperation with FAA

- **05/2015**
  - Work on ConOps and Open category
  - Prepare ICAO panel

- **06/2015**
  - RPAS session at EU/US annual conference
  - Consult on CONOPS
  - Impact assessment policy options
  - ICAO RPAS panel
  - Propose regulatory scheme for open category

- **09/2015**
  - Re-organisation of JARUS

- **11/2015**
  - Review standardisation bodies

- **12/2015**
  - Propose regulatory framework to EC
  - Regulatory proposal for low risk operations
  - ICAO RPAS panel
Thank You for your attention
Useful links:

- **Riga declaration:**

- **EASA Concept of Operations:**