



# EHPU Annual Meeting

## Airspace Officer Report

Presented by Vincent Treve

1st of February 2013, Amsterdam - Neetherlands



## OUTLINE

### 1. Annual airspace officer report

- Standardized European Rules of the Air (SERA)
- UAV regulation and impact assessment for Hang- and Para-glider
- Initiate contact and collaboration with EGU
- Additional feedback from EUROCONTROL and EASA

### 2. Future / proposed actions and road map



# Standardized European Rules of the Air (SERA)



## Standardized European Rules of the Air (SERA)

- Is a transposition of the ICAO provision into EC regulation package
- Nothing specific to PG or HG but nothing NEW neither

### PART-B

- will enter into force on the 4th December 2014
- address VFR rule of the air that applied to hang- and para-glider
- is a transposition of the ICAO provision into EC regulation package

### PATR-C

- Consultation started in January
- address the radio communication procedure and transponder use



## REGULATIONS

COMMISSION IMPLEMENTING REGULATION (EU) No 923/2012

of 26 September 2012

laying down the common rules of the air and operational provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010

### SECTION 5

*Visual meteorological conditions, visual flight rules, special VFR and instrument flight rules*

#### SERA.5005 Visual flight rules

- (f) Except when necessary for take-off or landing, or except by permission from the competent authority, a VFR flight shall not be flown:
- (1) over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 300 m (1 000 ft) above the highest obstacle within a radius of 600 m from the aircraft;
  - (2) elsewhere than as specified in (1), at a height less than 150 m (500 ft) above the ground or water, or 150 m (500 ft) above the highest obstacle within a radius of 150 m (500 ft) from the aircraft.



**NOTICE OF PROPOSED AMENDMENT (NPA) No 2012-14**

**DRAFT DECISION OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY  
AGENCY**

**on**

**Acceptable Means of Compliance and Guidance Material to Commission  
Regulation (EC) No XX/2012 laying down the common rules of the air and  
operational provisions regarding services and procedures in air navigation  
and amending Regulations (EC) No 1035/2011, (EC) No 1265/2007, (EC)  
No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No  
255/2010**

***'Acceptable Means of Compliance and Guidance Material to Part-SERA'***



## **Section 5 – Visual Meteorological Conditions, Visual Flight Rules, Special VFR and Instrument Flight Rules**

### **AMC1 SERA.5005(f) Visual Flight Rules**

#### **VFR MINIMUM HEIGHTS - PERMISSION FROM THE COMPETENT AUTHORITY**

The competent authorities should specify the conditions, including the minimum heights above the terrain, water or the highest obstacle within a radius of 150 m (500 ft) from an aircraft practising forced landings, a balloon or **an aircraft executing ridge or hill soaring.**



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### **GM1 SERA.5005(f) Visual Flight Rules**

#### **VFR MINIMUM HEIGHTS - PERMISSION FROM THE COMPETENT AUTHORITY**

Subject to an appropriate safety assessment, permissions from the competent authority may also be delivered for cases like:

- (a) aircraft operating in accordance with the procedure promulgated for the notified route being flown;
- (b) helicopters operating at a height that will permit, in the event of an emergency arising, a landing to be made without undue hazard to persons or property on the surface;
- (c) aircraft picking up or dropping tow ropes, banners or similar articles at an aerodrome;
- (d) Any other flights not specified above, where specific exemption is required to accomplish a specific task.





## Action taken

1. Meeting with Program Manager ASM/ATFCM/ATS - SERA mandate manager



## Outcome of the meeting

- Today
  - Specific rules for hang-gliding and para-gliding developed by EU states are fully in force
  - In states without specific rules defined for hang-gliding and para-gliding, a pilot performing a ridge soaring below 150m or flying less than 300m above congested area (cities, town or settlements) may be considered as in infraction with the Visual Flight Rule of the Air
- After December '14
  - In states with specific rules, these rules may be weaken if not legally invalidated because not compliant with AMC1 SERA-5005(f) and GM1 SERA-5005(f)
  - In states without specific rules, legal insecurity remains



## Conclusion of the meeting

- EHPU should consider developing European harmonised conditions for AMC1 SERA.5005(f)
- This should facilitate national acceptance
- Key elements are
  - Minimum altitude for ridge soaring
  - Minimum altitude over congested area
  - Condition for applications
- GM1 SERA.5005(f) requires “appropriated safety assessment” (SARPs = Standards And Recommended Practices)
- Formalisation of the safety assessment is important to be credible
- Suggested to be based on or inspired by:

COMMISSION IMPLEMENTING REGULATION (EU) No 1035/2011

of 17 October 2011

laying down common requirements for the provision of air navigation services and amending Regulations (EC) No 482/2008 and (EU) No 691/2010



## Safety assessment

- Scope
  - Ridge soaring
- Hazard identification
  - Flight incident leading to lost of altitude and un controlled heading change
- Risk assessment
  - Probability = TBD
  - Flight into terrain with associated Severity for the pilot
- Mitigation processes
  - Proposed altitude = 50m (To be confirmed) in place of 150m
  - to be shown to be reasonably safe because
    - Considered as sufficient for recovery



## Safety assessment

- Scope
  - Flight over congested area
- Hazard identification
  - Flight incident leading to lost of altitude and un controlled heading change
- Risk assessment
  - Probability = TBD
  - Flight into terrain with associated Severity for the pilot / environment
- Mitigation processes
  - Proposed altitude = 100m (To be confirmed) in place of 300m
  - to be shown to be reasonably safe because
    - consider as sufficient for recovery
    - of the limited impact on the environment (MTOW mitigation)
    - of the feasibility of reasonably safe landing in congested area (Landing speed)



# UAV regulation and impact assessment for Hang- and Para-glider



## Background and History

In 2010 EC realized operations were far ahead regulation

- 15 states had regulations for commercial used of UAS
- 6 states allowed commercial used of UAS on strict conditions
- US had a plan to produce regulation by 2016
- 1000 official commercial companies were operating UAS
- More than 30,000 UAS were officially operated
- Probably 10 times more sold

Regulation is needed for protecting airspace users, including Hang- and Para-gliders from user with no or limited aeronautical culture



## Background and History

In 2010 EC organizes a workshop for considering EU regulation

- 260 participants requested EC to define regulatory framework

In 2011 and 2012 additional consultation were organized and 3 roadmaps defined

- Regulatory roadmap
- R&D roadmap (SJU)
- Complementary road map (privacy, insurance,...)





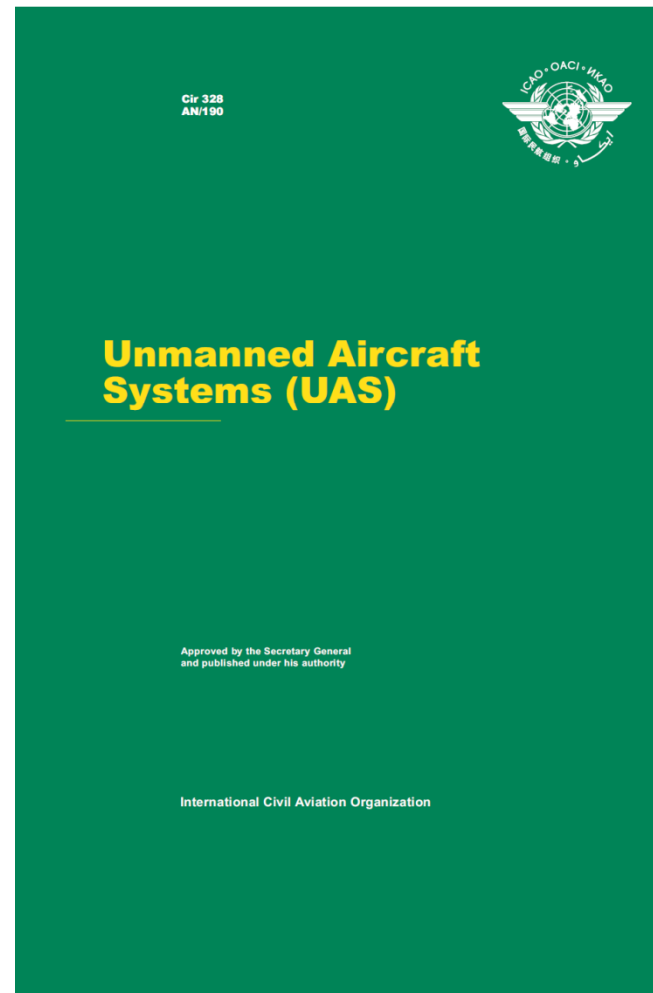
## Action taken

1. Meeting with Mr LISSONE Mike UAS ATM Integration Manager and Terminal Airspace Design



## Outcome of the meeting

Circular 328 AN/190





## Outcome of the meeting

Circular 328 AN/190 principles:

- VLOS
  - Allowed in 21 states
  - With remote pilot
  - Maximum range = 500m
  - Maximum altitude = 500ft
- B-VLOS
  - Allowed under VFR only below 500ft
  - In IFR above 500ft
  - Maximum range = 100km



VLOS = Visual line-of-sight

B-VLOS = Beyond visual line-of-sight



## Outcome of the meeting

### Circular 328 AN/190

#### COLLISION AVOIDANCE

5.2 The pilot-in-command of a manned aircraft is responsible for detecting and avoiding potential collisions and other hazards (see Figure 5-1). The same requirement will exist for the remote pilot of an RPA. Technology to provide the remote pilot with sufficient knowledge of the aircraft's environment to fulfil the responsibility must be incorporated into the aircraft with counterpart components located at the remote pilot station. As stated in Annex 2, paragraph 3.2:

*Note 1.— It is important that vigilance for the purpose of detecting potential collisions be exercised on board an aircraft, regardless of the type of flight or the class of airspace in which the aircraft is operating, and while operating on the movement area of an aerodrome.*

5.3 Paragraph 1.5.3 of the *Airborne Collision Avoidance System (ACAS) Manual* (Doc 9863) states that: "ACAS II was not designed with the intent of being installed on tactical military (e.g. fighter aircraft) or unmanned aircraft. As such, there are technical and operational issues that must be addressed and resolved prior to installing ACAS II on these types of aircraft." The nature and extent of the technical and operational issues will have to be assessed before any determination can be made as to the applicability of ACAS II for the RPA.

5.4 A fundamental principle of the rules of the air is that a pilot can see other aircraft and thereby avoid collisions, maintain sufficient distance from other aircraft so as not to create a collision hazard, and follow the right-of-way rules to keep out of the way of other aircraft. Integration of RPA may not require a change to the Standards, however, as RPAS technology advances, alternate means of identifying collision hazards will have to be developed with appropriate SARPs adopted. Regardless, the right-of-way rules will remain essential for the safe operation of aircraft, with or without a pilot on board. Likewise, for the surface movement of RPA in the aerodrome environment, it is necessary that RPA operations be conducted safely and efficiently without disrupting other aircraft operations.

5.5 Aircraft pilots are required to observe, interpret and heed a diverse range of visual signals intended to attract their attention and/or convey information. Such signals can range from lights and pyrotechnic signals for aerodrome traffic to signals used by intercepting aircraft. Remote pilots will be subject to the same requirements despite not being on board the aircraft, necessitating development and approval of alternate means of compliance with this requirement.



## Outcome of the meeting

Circular 328 AN/190 principles:

- UAV/RPAS shall
  - be able to detect and avoid
  - not use cooperative sensor
- UAV/RPAS could be used in dedicated corridor
  - Norwegian example of segmented airspace (grid with or without B-VLOS) for electric line survey
  - With a flight plan introduced for B-VLOS operations with information available through website
  - Detect and avoid capability without cooperative sensor still requested





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Note that hang- and para-gliders are relatively easy to detect, the technical challenge is to detect other small size UAV (size limitation may be imposed)



## Outcome of the meeting

CIR-328 will be replaced by ICAO RPAS Manual



ICAO

**Manual on Remotely Piloted Aircraft Systems (RPAS)**



## Outcome of the meeting

CIR-328 will be replaced by ICAO RPAS Manual

- 11 of the 15 chapters are written by EUROCONTROL and politically enforces the CIR-328 principles
- This Manual will impact most of the ICAO annexes
  - E.g., in Annex 2 commercial aircraft minimum weight requiring certification will be changed







## Outcome of the meeting

CIR-328 will be replaced by ICAO RPAS Manual

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- This Manual will impact most of the ICAO annexes
  - E.g., in Annex 2 commercial aircraft minimum weight requiring certification will be changed
- May be inspired of the well balanced UK or Swedish regulation considered as references in terms of completeness
- Will not significantly impact leisure flights



## Outcome of the meeting

EASA Notice of Proposed Amendment (NPA) is expected to be released in May or June



### Conclusion of the meeting

- General aviation and leisure activities well protected in the existing and coming regulation
- No short term threat on hang- and para-gliding
- EHPU should not be « worry » but should remain « concerned »
- Information meeting was proposed by EUROCONTROL UAS ATM Integration Manager



Initiate contact and collaboration  
with EGU

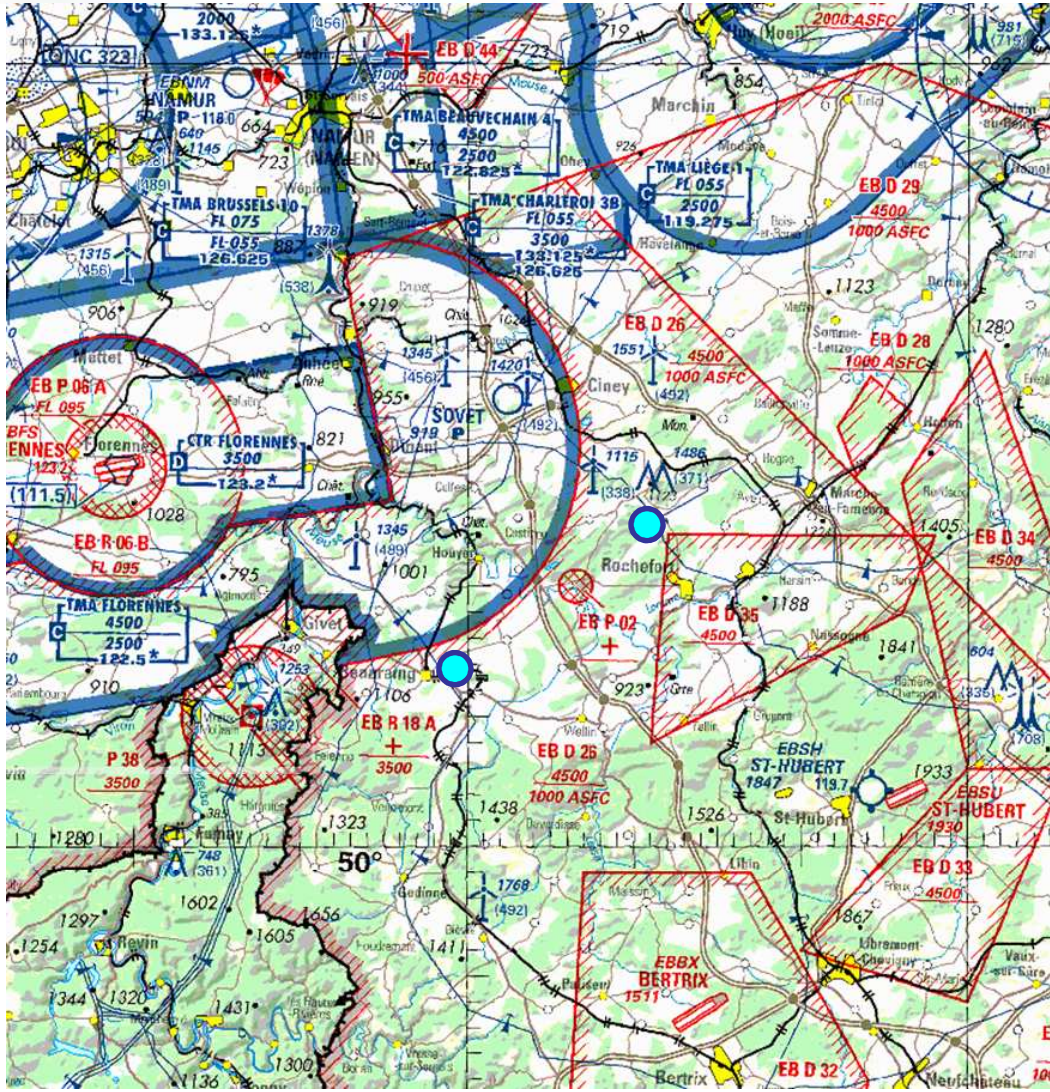


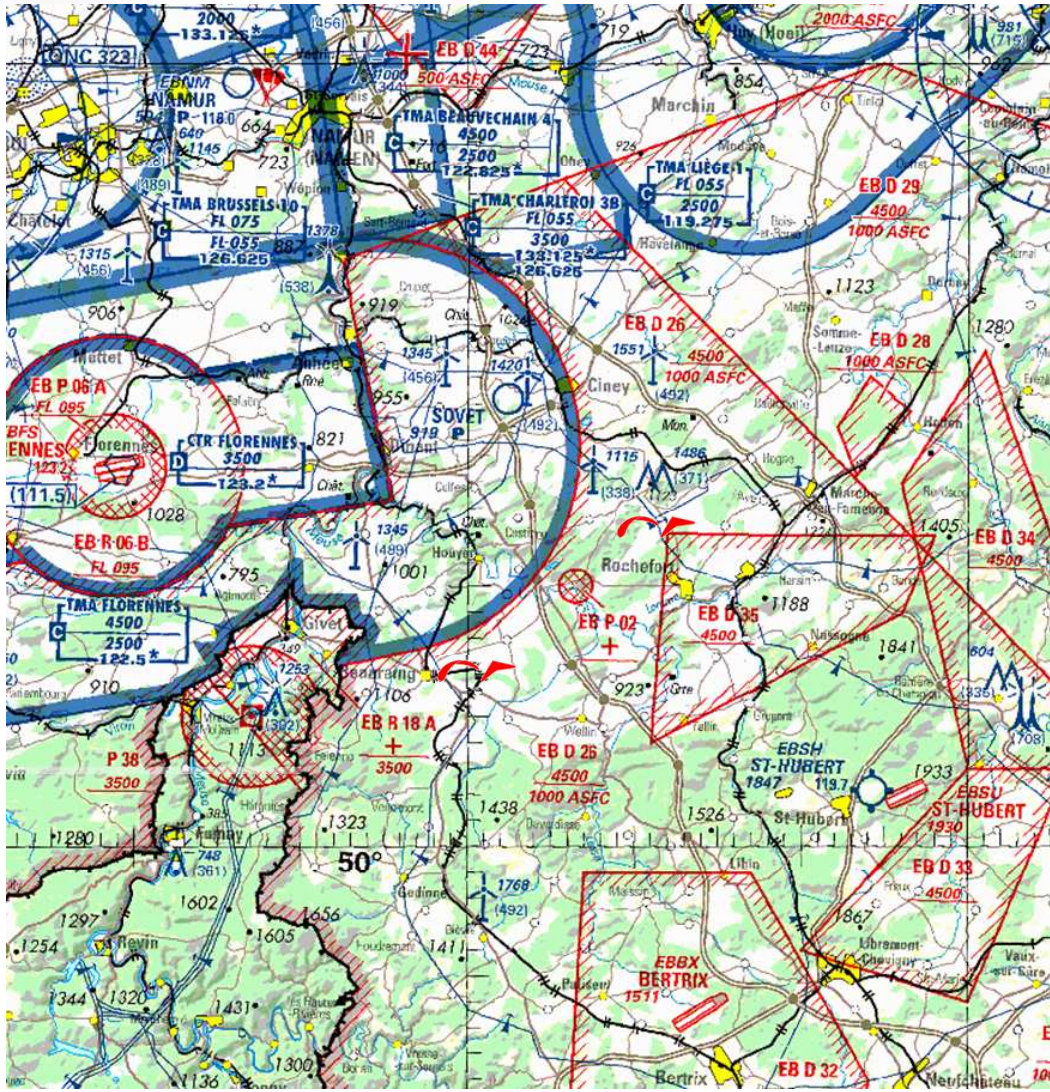
## Action taken

1. Contact initiated with Günter Bertram EGU airspace expert also secretary in the German Aero Club
2. Meeting is planned for 20th of February in EUROCONTROL



Additional feedback from  
**EUROCONTROL** and **EASA**









## Potential actions and road map for the Airspace Officer

1. coordinate the definition of European harmonised conditions for AMC1 SERA.5005(f) and to develop appropriate safety assessment in line with EC regulation
2. Involve EHPU in SERA Part 3 consultation
3. organise information meeting with UAS ATM Integration Manager
4. Initiate coordination with EGU AO

Question?

