2016 CIAM PLENARY MEETING

Item 13 - Open Forum

Drones Activities Development by CIAM

CIAM Organising Committee for FAI International Events for Drones

- **Terms of Reference:** published in July 2015
- **Mission**
  - Identify contact persons in FAI members countries interested in sporting events for drones
  - Define the best format for FAI International Sporting Events to be organised from 2016 and common rules for these events
  - Encourage organisation of FAI International Sporting Events for Drones in as many countries as possible
  - Find partners and sponsors for the FAI International Sporting Events for Drones
  - Work closely with the FAI Media and Communication office to make all this activity public
- **Term:** appointed from 1st July 2015 to 2017 CIAM Plenary Meeting

Composition of the CIAM Organising Committee for FAI IED

- **Chairman:** Bruno DELOR - France (CIAM 1st VP and CIAM delegate)
- **Members:**
  - Bob BROWN – USA (CIAM Delegate)
  - Robert HERZOG - Belgium (CIAM Delegate)
  - John LANGFORD - USA (CIAM Space Models Delegate)
  - Bengt LINDGREN - Sweden (CIAM Delegate and CASI member)

⇨ ***In addition, CIAM made a list of drone contact persons identified from about 20 FAI members countries***

3 main items for discussion

- **Drones activities development by CIAM**
- ***CASI decision relative to UAV***
- ***Drones' regulatory context***

Context analysis

- **CIAM must be proactive and flexible** regarding drones sport activities if we want to be an effective and recognized actor in that field**.**

  We have to consider that drone sport concerns a new breed of participants (pilots and investors) who generally **never** heard about FAI and CIAM, or national established bodies, or even regulations authorities

- **FPV Racing has a high potential of development**
  - Rapid worldwide development
  - Exciting for competitors
  - Well adapted for spectators (possibility to report pilot video camera view on large screens), for medias (possibility of a large audience by use of Watch HD Live Streaming video possibilities) and for sponsors

⇨ ***Priority for 2016 on Multi-rotor FPV Racing***

CIAM strategy

- **In order to promote FPV Racing on behalf FA/CIAM, CIAM Bureau has accepted** (3 and 4 December Meeting in Dubai)**:**
  - F3U 'RC Multi-rotor FPV Racing' as a provisional class to be effective 1st January 2016
  - FPV Racing World Cup (F3U) effective in 2016 if more than 5 Open International contests registered in the FAI calendar
- **Volume F3 Radio Control FPV Racing Model Aircraft** published on the FAI website beginning of January 2016
- **Rule freeze for this Volume :** Regarding the provisional statute of the F3U class, the content of this Volume not subject to Plenary Meeting approval, nor is it restricted by any rule freeze regulation. It is under the direct control of CIAM Bureau on recommendation from the CIAM Organising Committee for FAI IED and may be updated at any time during the year.

⇨ ***Plenary Meeting formal approval is requested for this Volume***

F3U rules *(1/2)*

- **FPV Racing:** 4, 6 or 8 multi-rotor flying together on a racing circuit
- **FPV** (First Person View)**:** the pilot (assisted by an helper) is equipped with a headset goggle (or with a screen) to pilot the model from the video picture of the onboard camera transmitted in real time
- **Specifications of the model**
  - Total weight (including batteries) < 1 kg
  - Electric propulsion (maximum voltage of 17.0 volts)
  - Distance between axes of the engines < 330 mm
  - Maximum diameter of the propellers 6 inches (15.2 cm)
  - Fail-safe device mandatory with possibility to stop the engines
- **Racing circuit**
  - Minimum developed size of 250 m for an outdoor field (80 m Indoor or in woods)
  - Shall be within a 180 m x 100 m rectangle
  - 3 to air gates to cross, and in addition possibility of obstacles (natural or artificial) to cross or avoid


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F3U rules *(2/2)*

- **Contest with three stages:**
  - Qualification stage to select the required number of competitors for the elimination stage
  - Elimination stage with successive rounds from 1/8th final to semi-final
  - Final
- **Qualification and the elimination stages**
  - Each round is organised by groups (subdivision of the round corresponding to the number of pilots flying at the same time in the same race)
  - **Option 1:** race with a number of circuit laps to realize (3 to 5 recommended)

    Option 2: race on an allocated flying time (2 to 3 minutes recommended)
- **Start of each race:** on a start line or on a grid pattern as for Formula 1 start
- **1 judge for each pilot:** in charge of checking all aspects of the competitor's racing on the circuit and of timekeeping when necessary

Other Drone Racing initiatives

- **World Organization of Racing Drones** (WORD) and **World Drone Prix** (March 2016 in Dubai) announced 12 December ($ 1.000.000)
  - ⇨ *http://www.droneworlds.com/*
- **2016 World Drone Racing Championships** (20 to 22 October at Kualoa Ranch in Hawaï) announced in October 2015 ($ 200.000 cash)
  - ⇨ *http://www.worlddroneprix.com/*
- **Initiate discussion and possible collaboration with various regional organisations like European Rotor Sport Association** (ERSA)

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CASI decision relative to UAV

Meeting Rotterdam 23 September 2015

- **Transfer from CASI to CIAM of the FAI activities relative to Unmanned Aerial Vehicle** (Class U)
- **CASI argumentation**
  - Drone is a 'hot' worldwide subject at the moment and has to be handled globally by FAI regarding impact on sport CIAM activities
  - The same product can be used both for commercial and recreational / sportive purposes
  - CIAM has the focus on the subject and the expertise to handle all types of drones records and CASI is not the best place to develop record activities
  - Allows reduction of the number of sub-classes for records

Definitions

- **Model Aircraft** (Class F)
  a) A model ***aircraft*** is an aircraft of limited dimensions, with or without a propulsion device, not able to carry a human being and to be used ***for competition, sport or recreational purposes***
  b) For the whole flight, a radio-controlled model aircraft must be within visual line of sight (VLOS) of the person who assumes directly its control or who is in a situation to take the direct control at any moment, including if the model is being flown automatically to a selected location
- **UAV** (Class U)**:** An ***aerodyne*** with means of propulsion that does not carry a human, and which is designed ***for scientific research, commercial, governmental or military purpose***
- **Visual line of sight** (VLOS)**:** direct unaided (other than corrective lenses) visual contact with the model aircraft to monitor its flight path and meet separation and collision avoidance responsibilities

CIAM Bureau position

- **Acceptance under the following considerations**
- **Restriction for UAV to sports activities (records) and only for civil purpose** considering aims fixed by FAI to CIAM
- **Regarding the VLOS requirement applicable to aeromodelling**, CIAM must consider the risk to deviate with UAV record activities from this basic principle
- **Cautious to wait orientations to be defined by the safety and regulation of civil aviation authorities** (especially EASA and FAA)

➥ ***Inclusion of the Sporting Code Section 12*** *(Class U records activities)* ***in Section 4*** *(Volume "CIAM Records Rules")*

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‘Drones’ regulatory context is moving

- **International Civil Aviation Organization** (ICAO)**:** Remotely Piloted Aircraft Systems Panel (RPASP) created to produce for 2018 a draft Standards and Recommended Practices (SARPs) focused on international operations
- **European Aviation Safety Agency** (EASA)
  - ‘Introduction of a regulatory framework for the operation of drones’
  - Technical Opinion (18 December 2015) ‘Introduction of a regulatory framework for the operation of unmanned aircraft’ related to the A-NPA 2015-10 (31 July 2015)
  - Unmanned aircraft defined as ‘*any aircraft operated or designed to be operated without a pilot on board’*
    Term ‘*drone*’ used in communications addressing the general public
- **Federal Aviation Administration** (FAA)**:** Registration of all small UAS (weight between 0.55 and 55 pounds) including model aircraft (21 December 2015)

➥ ***FAI must take care of this moving regulatory context***

Breizh FPV Racing 35 - Plerguer - France) :
https://www.youtube.com/watch?v=Muyxi9dpVvA

Thank you for your attention

Place to discussion now

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