



Fédération Aéronautique Internationale

109th FAI General Conference

Rotterdam, Netherlands
25 & 26 September 2015



FAI Classification

- **2 Classes** covering aircraft which does not carry a human being :
 - **Class F** - Model Aircraft ⇒ **CIAM**
 - **Class U** - Unmanned Aerial Vehicle (UAV) ⇒ **CASI**
- **Class F:** 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**
 - ↳ **Sporting Code Section 4** (competition & records activities)
- **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**
 - ↳ **Sporting Code Section 12** (records sport activity)

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'Drones' worldwide context

- **Industrial context**
 - Drone industry extremely innovative with high involvement of the SMEs (small and medium-sizes enterprises)
 - Large range of types of drones from micro-drones up to highly sophisticated equipments with a MTOM of 16.000 kg and with various drone configurations (fixed-wing, rotorcraft or tilt rotor, airship)
 - Diverse types of operations (aerial photography, precision agriculture, surveillance or inspections of buildings and industrial equipments)
 - Production of small drones unprecedented in aviation (1.000.000 drones produced in 2014)
- **Societal considerations**
 - Public acceptance with a mix of attraction for this new technology with multiple applications and concerns about safety, security and privacy
 - Safety concerns: mainly risks of collision with manned aircraft below altitude 150 m above ground
 - Security concerns: increase of flights over restricted areas
 - Privacy concerns: personal datas protection

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'Drones' regulatory context is moving

- **International Civil Aviation Organization (ICAO)**
 - Circular 328 AN/190 relative to Unmanned Aircraft Systems (UAS) published in 2011
 - 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)**
 - Advance Notice of Proposed Amendment 2015-10 (31 July 2015) 'Introduction of a regulatory framework for the operation of drones'
 - EASA finally followed the general usage of the term 'drone' with the following definition : 'aircraft without a human pilot on board, whose flight is controlled either autonomously or under the remote control of a pilot on the ground or in another vehicle'
 - **Federal Aviation Administration (FAA):** Small UAS Notice of Proposed Rulemaking (NPRM) proposed in March 2015
- ⇒ **FAI must take attention to this new and moving context**

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CIAM general considerations

- **Impact of technology on the actual FAI model aircraft classes** (competition and records)
 - Actual FAI model aircraft classes are defined for competition purposes only
 - Use of electronic devices offers possibility of increased performances
 - ⇒ **Each CIAM Sub-Committee defines how such devices can (or cannot) be used and the appropriate requirements and limitations**
- **New types of aircraft with possibility of different events** (recreational, competition and records)
 - CIAM must take attention on new activities possible with current available technology especially FPV Racing
 - CIAM must show its interest for new types of model aircraft such as multi-rotor (multi-copter)

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CIAM UAV Working Group

- **Terms of Reference:** Version 1.0 - June 2014
- **Mission**
 - Evaluation of the impact for CIAM activities of the current available technology especially regarding the sporting activity and events
 - Preparation of a draft rule to be considered as a base for future sporting events and consider whether a test event can be organized
- **Produced documents**
 - **UAV WG Report** Edition 2 - 20 January 2015 (final report as evaluated by the CIAM Bureau and presented at the CIAM Plenary Meeting)
 - **Draft Rule for Drone Model Aircraft Events** Edition 1 - 1st May 2015 covering two types of events:
 - Contest event for multi-rotors (FPV Racing and Freestyle Aerobatics)
 - Recreational event for based on a list of flight tasks to be done (for multi-rotors and/or fixed wing drones)
- **Term:** appointed from June 2014 to April 2015

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CIAM Organising Committee for FAI International Events for Drones

- **Terms of Reference** finalised 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
- ⇒ **Priority on FPV Racing Contests (Provisional class rules + World Cup)**

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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 complement, identification of contact persons (PoC) in FAI members countries interested in sporting events for drones.
It is still time for that. Thanks in advance to the FAI Delegates to help me*

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Actual CIAM orientations

- **Consideration in CIAM** of all sportive and recreational activities done with all types of aircraft of limited dimensions not able to carry a human being
- **Clear differentiation between class F (model aircraft) and class U (UAV)**
 - ⇒ *Use of the terms UAV (and UAS or UA), RPA/RPAS only for professional activities (scientific research, commercial, governmental or military purposes)*
- **Clarification of the definition of a Model Aircraft** (Volume ABR) unanimously approved by the April 2015 CIAM Plenary Meeting
- **Introduction of the notion of Drone Model Aircraft**

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Definitions

- **Model Aircraft**
 - 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
 - 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
- **Drone Model Aircraft:** A model aircraft equipped with on-board electronic devices (video camera, gyro sensors, altimeter, telemetry, GPS, , ...) for the main purpose of video or still photography and/or to assist automatic flight
- **Visual line of sight (VLOS):** The flight operator who assumes directly the control of the model aircraft **must maintain direct unaided visual contact with the model aircraft**

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Other approach discussed by CASI

- **Proposal:** Move UAV activities to CIAM in order to reduce the groups of sub-classes for records
 - **Main reasons in favour**
 - 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 as commercial or as recreational / sportive (the use defines the status for the drone)
 - CIAM has the focus on the subject and the expertise to handle all types of drones records; CASI is today not the best place to develop the record activity
 - **Main reason not in favour:** CIAM is not actually handling commercial subjects today
- ⇒ *As approved by CASI Meeting, CIAM will now cover all drones activities and so class U (UAV)*

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Conclusion

- **FAI must be proactive on drones** regarding the stakes
- **CIAM must innovate and be 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 **never** heard about FAI/CIAM, orf national established bodies or even regulations authorities
- **FPV Racing has a high potential of development:**
 - Exciting for competitors with a rapid worldwide development
 - 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

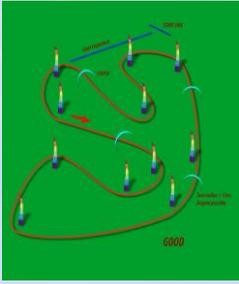
⇒ *FPV Racing demonstration event at the 2015 WAG in Dubai?*

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FPV Racing



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