F9 DRONE SPORT ZOOM TECHNICAL MEETING
Saturday 9th April 2022

- Previous F9 Technical Meeting: Saturday 10th April 2021
- According the CIAM General Rule A.5.2:
  - Technical Meeting held by the Subcommittee Chairman prior to the CIAM Plenary Meeting
  - Eligible to attend: Subcommittee members, voting Delegates, Alternates and any others approved by their NAC
  - The meeting ‘shall consider items in the Agenda for the purpose of discussion and briefing of all those present and shall, through the Subcommittee Chairman, make their recommendations’ to the Plenary Meeting
  - Only one person per country may vote
- Publication of the Technical Meeting Minutes: no later than Friday 22th April 2022
• **Chairman:** Bruno DELOR

• **Composition (according to CIAM General Rules A.7.2):**
  - In addition to the Chairman, members must all be from different countries
  - Members are selected by the Chairman from the F9 Technical Experts appointed by NACs
  - Subcommittee members serve as individual expert consultants and are not obliged to represent the views of their NAC
  - List of the members of the Subcommittee published on the FAI website ([https://www.fai.org/page/ciam-subcommittees](https://www.fai.org/page/ciam-subcommittees))

• **34 countries represented in 2022**
  - Asia & Oceania (8): AUS - HKG - INA - JPN - KOR - NZL - THA – TPE
  - America (3): BRA - CAN - USA
  - Africa (2): ISR - RSA

• **Use of Basecamp for the Subcommittee exchanges**
**Major Drone Racing events**

- **Drone Racing World Cup**
  - Challenger Series *(effective from 2017)*
  - Masters Series *(introduced in 2019)*
  - *No World Cup ranking in 2020 & 2021 due to Covid*

- **World Drone Racing Championship (WDRC)**
  - Initially, awarded to China in October 2017 for 3 years
  - 1\textsuperscript{st} edition held 1 to 4 November 2018 in Shenzhen
  - 2\textsuperscript{nd} edition held 10 to 14 December 2019 in Ningbo
  - *No WDRC Grand Final in 2020 & 2021 due to Covid*

- **The World Games (TWG) 2022 in Birmingham, Alabama (USA)**
  - TWG is led by the International World Games Association (IWGA) and recognized by the International Olympic Committee (IOC)
  - TWG 2021 had been postponed to July 2022 when the 2020 Olympic Games in Tokyo had been postponed to 2021 due to Covid
  - 3600 athletes - 36 sports & 58 disciplines
  - FAI concerned by 2 air sports (Drone Racing & Canopy Piloting)
Consequence of the competition break generated in 2020 and 2021 by the Covid situation

- The number of World Cup events actually published on the FAI Calendar is half the number of events in 2018 and in 2019
- In addition, a decrease of the number of competitors participating in World Cup events may be unfortunately expected as a

Real challenge to recover the sporting activity level
2021 WDRC Grand Final
- Evaluation done by ASFC of different locations Shanghai, Taiyuan (Shanxi Province) and Wuxi (Jiangsu Province)
- Finally, the 2021 WDRC Grand Final had been cancelled considering the uncertainties in the prevention and control policies even if China was considering to be able to hold it applying “Group Quarantine” for the event (announcement done at the 10th April 2021 CIAM F9 Technical Meeting)

2022 WDRC Grand Final
- Beginning October 2021, ASFC informed FAI about the possibility to hold mid October the 2022 WDRC in Tuiyuan (Shanxi Provinve)
- It looks actually difficult for ASFC to organize a satisfactory event under the current circumstances

Note: this also concerns the 2022 FAI General Conference in Wuhan

2023 WDRC Grand Final: Call for proposals to be launched just after the 7th May 2022 CIAM Plenary Meeting
- **Dates:** July 7 (Opening Ceremony) to July 17 (Closing Ceremony)
- **Drone Racing competition:** July 9 and 10 in Protective Stadium (instead Barber Motorsports Park initially allocated)
- **FAI responsibilities**
  - **Sporting rules:** TWG 2022 Drone Racing sporting rules Edition 1st January 2022 (*published on March 5*)
  - **Selection process** Drone Racing selection rules distributed on 17th July 2021
  - **Nomination of the FAI Officials** (8 persons): International FAI Jury and Judges
    - Supervisor judge: Sotir LAZARKOV (BUL)
    - Pilot judges: Oscar CHINELLO (ITA) - Jose-Manuel MARTINEZ-IBANEZ (ESP) - Angelika MÖBIUS (GER) - Frédéric THEUREL (FRA)
- **Responsibility of the organization of the event:** Birmingham Organization Committee (BOC) with the support of the Drone Soccer US chaired by David ROBERTS

⇒ **FAI web TWG 2022 minisite:** [https://www.fai.org/worldgames2022](https://www.fai.org/worldgames2022)
- **Number of athletes:** 32 (20 men & 12 women prescribed by IWGA)
- **Competition format:** Scenario B with double elimination sequence applied including for the final stage
- **Men and women reference ranking lists**
  - Based on the results of the 2019 WDRC Grand Final and World Cup contests held in 2019 and 2021
  - For each competitor, the sum of his (her) three best event results (numbers of points) is considered taking into account one World Cup contest per organising country
- **Athletes’ selection**
  - Men selection list with the 60 best placed competitors on the reference ranking list
  - Qualification of the best placed competitors with one athlete in each gender for each country concerned
  - One man and one woman wild cards allocated to USA as host country
  - Due to a higher number of withdrawals than expected, a second man competitor had been finally qualified for some countries considering the selection list

*Note: Due to Ukraine invasion, IWGA decided to ban BLR and RUS from participating*
Drone Racing competitors qualified *(in date of 8th April 2022)*

- **Women**: 10 competitors (from 10 countries) qualified due to the RUS competitor banned and withdrawal of the AUS and GER competitors
  
  *Note: The 2 slots for women not used had been allocated to men*

- **Men**: 22 competitors (from 19 countries) qualified
  
  *Note: KOR, POL and FRA concerned by a second competitor qualified*

- **23 countries participating**

<table>
<thead>
<tr>
<th>PLACE</th>
<th>NAME</th>
<th>NATIONALITY</th>
<th>TOTAL OF POINTS</th>
<th>Number of Competitors Taken in Account</th>
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<td>ROUSEAU Killian</td>
<td>FRA</td>
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<td>2</td>
<td>PETERSONS Tommass</td>
<td>LAT</td>
<td>170</td>
<td>6</td>
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<tr>
<td>3</td>
<td>PARK Sung Ju</td>
<td>KOR</td>
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<td>4</td>
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<td>POL</td>
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<td>5</td>
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<td>KOR</td>
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<td>6</td>
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<td>TUR</td>
<td>119</td>
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<td>FIN</td>
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<td>HKG</td>
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<td>22</td>
<td>TURNER Evan</td>
<td>USA</td>
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<td>Wild card</td>
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</tbody>
</table>

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- **23 countries participating**
- **Volume F9 Drone Sport**
  - Drone Racing World Cup rules
  - F9A (Drone Soccer) rules
  - F9U (RV Multi-rotor Drone Racing) rules

- **Content of the Volume** not subject to Plenary Meeting approval considering the provisional statute of the F9A and F9U classes
  - *Under control of CIAM Bureau with possibility to update at any time during the year*

- **Last release is dated 1st March 2022** *(previous one was 1st January 2021)*
  - Drone Racing World Cup rules change: sum of the best 3 (instead of 4) event results (number of points) taken into account for the World Cup competitors’ score

- **Justification**
  - Improve the interest of the World Cup considering the decrease of the number of events registered
  - Offer a better chance for the competitors outside Europe to be well placed
● Proposals published on the Agenda of the 2022 Plenary Meeting Agenda
  ▪ Evaluation must be done by the concerned Technical Meeting with a recommendation for the CIAM Delegates
  ▪ Vote on all Sporting Code proposals scheduled May 1 to 3

● Proposal from Germany on Drone Soccer Subclass F9A-B

B.1.1. Weight and size
b) Subclass F9A-B
The total weight of the drone ball including all equipment necessary for flight (including outer frame and batteries) shall not exceed 300 g 400 g. The diameter of the frame must be 20 cm ± 2 cm 22 cm ± 2 cm.

Reason: Drone balls in the previous dimensions are very difficult to make yourself. Since last year there have been very inexpensive balls that can be used excellently for this class and that can be bought worldwide. Unfortunately, these balls have a diameter of 230mm and a take-off weight of approx. 350g. The use of these balls represents an opportunity to promote class F9A in youth work
Evaluation of the F9 rule change proposal (2/2)

- **History of the FAI Drone Soccer class (F9A)**
  - 1\textsuperscript{st} May 2019: Introduction of F9A as a provisional class
  - 1\textsuperscript{st} January 2020: Introduction of two subclasses: F9A-A (400 mm diameter) and F9A-B (200 mm diameter)
  - 1\textsuperscript{st} January 2021: based on a German request, weight of the drone ball in subclass F9A-B increased to 300 g (instead 200 g initially)

- **Drone Soccer context**: introduced as a FAI class considering it was an attractive and promising drone team sport
  - Based on a match (3 sets of 3 minutes) between 2 teams (3 to 5 players per team) with each player piloting a drone soccer
  - Easy for the public to understand and to follow
  - Well adapted for practice in a gymnasium

- **F9A-B Subclass**: interesting for educational purpose
**Drone Racing class (F9U)**

- **C.1.5 Video system**: Implementation of possibility to use digital HD FPV system
- **C.9.3 Judges**: Introduction of flexibility giving for example possibility to use a centralized video recording with the 4 pilots’ video on a unique large screen avoiding necessity of one judge dedicated to each pilot as actually specified in the rules

- ....

> Basecamp S/C discussion hold on October 2021 had not been conclusive

> Necessary to continue the discussion in order to be in situation to do S/C proposals of rules’ changes before 15 November 2022

**E-sport in Drone Racing**

- Launching of an International Series of Drone Racing e-competitions
- 3 components necessary
  - Simulator
  - Competition Management System
  - Digital platform

> Opportunity to make Drone Racing a global hybrid sport by combining real sport and e-sport