Systematics of FAI Aeromodelling Contest

Since the new generation of batteries for electric flight has found widespread use, the question has come up in the CIAM, whether independent FAI competition categories for electric flight should be upheld in the future or whether integration of these categories into others, due to unity of the subject matter and existing systematics, is not called for. This has led me to examine a majority of existing competition categories with regard to their systematics and uniformity. I used four different main criteria, subdivided them each into various subcriteria and then summarised everything in an overview table. This helped me to form as objective an evaluation of the situation as possible.

The following criteria were used:

1. Type of model

2. Tasks (to be performed at competitions)

3. Control systems

4. Propulsion systems

In the main competition categories I looked at, F1 to F5 and Space, I found that none of them correspond in more than two technical points or points regarding content. The most extensive mixture of different criteria is to be found in class F3, which is to be expected due to its relatively short history. We found the largest number of corresponding points in F1 (free flight): control and duration. In F5 (electric flight): control and propulsion. This shows that reorganisation of the competition categories would not necessarily have electric flight as a priority. In my overall estimation, the biggest need for action would be in F3, which could, for example, be divided into gliding and motorised flight or into aerobatics and other tasks.

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Four criteria (types) for a system of aeromdelling competitions (10-08-06)

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1. Type of Aeromodel	1.1 Lighter than Air
	1.2 Glider
	1.3 Powered Model Airplane,
	1.4 Helicopter
	1.5 Gyrocopter
	1.6 Flexwing
	1.7 Rocket
2. Type of Control	2.1 Freeflight (FF)
	2.2 Control Line (CL)
	2.3 RC
	2.4 Autonomous (AUT)
3. Type of propulsion	3.1 Gliding (GL)
	3.2 Rubber (RU)
	3.3 Combustion Engines (CE)
	3.4 Turbines (TU)
	3.5 Electric Power (EP)
	3.6 Rocket (RO)
	3.7 Mixed power (MX)*
	3.8 Hot Air (HO)
4. Type of Task	4.1 Duration (DUR)
	4.2 Distance (DIS)
	4.3 Altitude (ALT)
	4.4 Speed (SPD)
	4.5 Aerobatic (ARC)
	4.6 Racing (RAC)
	4.7 Combat (COB)
	4.8 Reproduction (REP)

* two or more different kind of propulsions allowed

1. Type of Aeromodel

		Light	Glid	Power	Heli	Gyro	Flex	Rock	
Freeflight	F1A								
	F1B								
	F1C								
	F1D								
	F1E								
	F1Q								
Control Line	F2A								
	F2B								
	F2C								
	F2D								
Radio Control	F3A								
	F3B								
	F3C								
	F3D								
	F3J								
	F3P								
	F3M								
Scale	F4B								
	F4C								
Electric Powered Model Aircrafts	F5A								
	F5B								
	F5C								
	F5D								
	F5E								
	F5F								
	F5G								
Balloons	F7A								
Space	S1								
	S2								
	S3								
	S4								
	S5								
	S6								
	S7								
	S8								
	S9								
	S10								

2. Type of Control

		FF	CL	RC	AUT				
Freeflight	F1A								
	F1B								
	F1C								
	F1D								
	F1E								
	F1Q								
Control Line	F2A								
	F2B								
	F2C								
	F2D								
Radio Control	F3A								
	F3B								
	F3C								
	F3D								
	F3J								
	F3P								
	F3M								
Scale	F4B								
	F4C								
Electric Powered Model Aircrafts	F5A								
	F5B								
	F5C								
	F5D								
	F5E								
	F5F								
	F5G								
Balloons	F7A								
Space	S1								
	S2								
	S3								
	S4								
	S5								
	S6								
	S7								
	S8								
	S9								
	S10								

3. Type of Propulsion

		GL	RU	CE	TU	EP	RO	MX	HO
Freeflight	F1A								
	F1B								
	F1C								
	F1D								
	F1E								
	F1Q								
Control Line	F2A								
	F2B								
	F2C								
	F2D								
Radio Control	F3A								
	F3B								
	F3C								
	F3D								
	F3J								
	F3P								
	F3M								
Scale	F4B								
	F4C								
Electric Powered Model Aircrafts	F5A								
	F5B								
	F5C								
	F5D								
	F5E								
	F5F								
	F5G								
Balloons	F7A								
Space	S1								
	S2								
	S3								
	S4								
	S5								
	S6								
	S7								
	S8								
	S9								
	S10								

4. Type of Task

		DUR	DIS	ALT	SPD	ARC	RAC	COB	REP
Freeflight	F1A								
	F1B								
	F1C								
	F1D								
	F1E								
	F1Q								
Control Line	F2A								
	F2B								
	F2C								
	F2D								
Radio Control	F3A								
	F3B								
	F3C								
	F3D								
	F3J								
	F3P								
	F3M								
Scale	F4B								
	F4C								
Electric Powered Model Aircrafts	F5A								
	F5B								
	F5C								
	F5D								
	F5E								
	F5F								
	F5G								
Balloons	F7A								
Space	S1								
	S2								
	S3								
	S4								
	S5								
	S6								
	S7								
	S8								
	S9								
	S10								