REPORT TO BUREAU NOVEMBER 2018 - Electronic Devices in Competitions (EDIC) Working Group

The Working Group has now been operating for five years - since January 2014.

CURRENT STATUS

F5J AMRT Devices

We are now in the third generation of devices with a trend towards miniaturisation and in built displays.

The Approval List on the FAI Website shows all products with valid current Approvals.

Space Modelling Altimeters

Space Modelling continues to only have one manufacturer supplying devices. An inherent problem is the low number requirement by the SM Community meaning that manufacture of SM altimeters is not commercially attractive.

The EDIC specification has required serial number marking on the product for competition administration purposes. However due to the small size of the device, this had become a significant issue to the extent of discouraging more manufacturers. After further consideration, SM S/C have agreed that this is not necessary, (an embedded serial number is computer readable).

An update of the specification is attached and subject to acceptance by Bureau can be included in the Sporting Code with effect form January 2019.

F5B, F5D and F5F

Power Limiter Devices and Telemetry equipment devices from a USA manufacturer have now been used at two World Championships. These continue to only be available from one manufacturer.

A longer term project is the consideration of automatic Base B detection. An additional F5 member with specialist technical knowledge has been appointed to the EDIC Working Group to contribute on this subject.

CONSIDERATIONS FOR THE FUTURE

F1 Sub-Committee have prepared a document on the requirements for embracing more technology in the running of their competition Classes. There are two primary requirements, flight timing and electrical energy limiting. There is also a consideration on using gps positioning information.

The common aspects of the F1 and SM altimeters are currently under consideration with the object of trying to raise more interest from manufacturers. Obviously the basic considerations have potential for other disciplines, F3, F5 and Space Modelling. CIAM should encourage all S/Cs to work with EDIC WG to explore the common ground.

With the exception of altimeters, the commercial market for electronic devices in competitions is small and is a poor business model in which a manufacturer might invest time and money. This is particularly true where equipment used by competitors is supplied by the Contest organiser.

Types of Electronic Equipment

CIAM Contest categories can potentially involve altimeters, flight timing, positioning, energy measuring/limiting, radio based communications.

All competition categories have possible applications using radio communications as a means of linking the competitor/his model with an organiser's base station. However the use of any form of radio communication is subject to legal restrictions in each particular country.

It would be prudent for CIAM to determine the extent that legal restrictions might impinge on world wide acceptance of any CIAM application which might employ radio communications.

The possible use of mobile telephone Apps for various contest administration purposes is often raised. Currently possible interference issues with radio control equipment are considered a limitation.

Automatic Timekeeping for Soaring Classes

Flight timing invariably involves detecting the start and ending of a flight. The subject is technically complex and can involve motion detection, altimeters or a combination of both. There is also the possibility that gps technologies could contribute.

There has been some development work undertaken independently by interested parties. This has shown possibilities but has also highlighted some of the technical difficulties. Only one manufacturer has been involved in this. Others are requesting more details of possible CIAM requirements and are seeking an opportunity to put forward alternative ideas.

F5 S/C has not raised any requirements beyond the current Class Rules, nor has EDIC WG been requested to undertake any investigation of possible technical approaches. An aspect that must be fully investigated is the integration of Flight Timing and Working Period Timing into any technological based system.

Class Rule Considerations

In situations where technological considerations are not necessarily aligned with Class Rule requirements, any proposed Rule amendments should be in the best interests of the competition Class and not driven by technological issues. Guidance on such considerations must come from the S/Cs – the purpose of EDIC W/G is to provide technical support to the Class Rules.

CONCLUSION

To achieve the best possible outcome for any CIAM requirements, the cooperation of manufacturers is essential. This is a difficult scenario since commercial confidentiality restricts the exchange of information.

We must avoid the situation where a single manufacturer develops a product and then its adoption is forced on a competition category by Changes to the Class Rules.

The best approach for CIAM has to be that the various S/Cs define their requirements, specifications are prepared by the S/C and EDIC WG, then all interested manufacturers are given the opportunity to become involved.

It should be a matter of priority for each S/C to define the technical requirements that they anticipate will be required in the foreseeable future as has already been done by F1.

We only have limited resources essentially provided by volunteers. There may well be a future requirement to outsource some of the technical work and a source of funding would required to support this.

Eur Ing Paul Newell 12 November 2018
Chairman FAI-CIAM EDIC Working Group