IT Working Group report for CIMA Plenary 2019

V3: Richard Meredith-Hardy Nov 2019

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Wiki

Maintained by RMH

The wiki server was moved from an obsolete WIN2003 server to a WIN2016 one in August 2019. This entailed quite a lot of work (10 days!) but should make the wiki more reliable.

It was not moved to a FAI server because RMH has no knowledge of Linux and would not have been able to do the move or maintain it any more. Wiki is on its own dedicated server at a cost of 20.16€ per month.

Email notifications still not working on new server – various technical issues still being investigated - this is a priority to fix.

The wiki version is still Confluence 3.1 which is essentially obsolete but does not have any serious security issues. There is a plan to upgrade when time permits, but is a big job as it has to go though several upgrade iterations to get to the current Confluence v7.

FAI New Technology Working Group (NTWG)

Established September 2019 by EB, tasked to present a proposal for the FAI's GC 2021. Contains delegates from most commissions; RMH for CIMA.

Looking at:

- Flight recording methods, protocols and formats. Propose a new flight recording format, plus secure protocols to do it, based on the experience of the aging .IGC format using modern technologies and formats like JSON, etc., …
- Flight tracking technologies for live tracking of our sports, using the experience of the OGN network, plus some of the experiences of the paragliding community and balloon community.

So far, some discussion but not much progress. Leader, Angel Casado is very strong in the OGN movement; fundamental problem is OGN is 'fire & forget' which means if fixes are lost they are not recovered on-air. Works great for real-time displays where missing fixes are not critical, but no good for real-time scoring which must be the ultimate objective. With OGN, loggers still have to be downloaded after landing which does not really move things along.

The mission is complicated by the various demands of some commissions, eg end-to-end encryption, delays to release of data Etc.

AMOD

The AMOD is a cheap single chip device; they use EPROM for memory, they are dying because this type of memory has a finite write – read life. We do urgently need a replacement.

GAC Logger

GAC have approved a very simple and cheap logger similar to AMOD: Renkforce GT-730FL-S. RMH has one, but could find no simple way (in time available) to adapt it to a suitable downloader compatible with CIMA requirements (eg FRDL) due to it having a binary data protocol. Probably is a good replacement for AMOD if someone is prepared to make a downloader compatible with CIMA requirements in S10 Annex 6.

The LAA Czech Logger

Correspondence from Lukáš Běhounek 18 Sep 2019: *We are currently successfully testing first 50 loggers on national level. We have tested some of the loggers on EMC in Lithuania as well, they worked like a charm.*

As of 21 Nov 2019 they have tested barometric pressure sensors and consider them precise enough to be used in competition flying. They have also successfully tested the SIM7600CE 4G module and sent location data to their server (being able to visualize it on a map).

They are currently analyzing mobile systems used in different countries to make sure that frequencies used by the selected module will be compatible with frequencies used worldwide. 2G (GSM) has already been switched off in Australia, USA and parts of Asia, 3G (UMTS) future is also quite uncertain, especially in Europe. The 4G (LTE) module is significantly more expensive but considered definitely worth it as it makes the whole device more future-proof.

Right now they consider the live data version to be doable and are continuing to develop a prototype which they believe could be ready by the end of 2019.

Thereafter, they will need some source of funding to continue developing the prototype to a fully working solution with all the features needed.

RMH believes this is by far the best candidate for replacement of AMOD; it is a development work which is specifically targeted towards our needs and is already working in prototype form.

The projected cost of a production device is 120-150€

RMH recommends:

- Not to wait for a solution as recommended by NTWG which is likely to be complicated, expensive, unlikely to be ready for several years, and to begin with, may not meet all our requirements anyway.
- CIMA supports this initiative and acts now to allocate the budget it created 5 (?) years ago towards a project like this.