FAI New Technology Expert Group

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In the last year NTEG was quite inactive. Lately new activity has started and Marc André has been appointed as point of contact for the expert group. The expert group currently focuses on providing technology to improve visibility of the air sport, especially towards the World Air Games 2015.

One major work package is to develop a tracking infrastructure which can be used in most FAI events and which serves most of the requirements for the major air sports. While the current work is again focused on the WAG, the requirements for the other disciplines are kept in mind.

Tracking infrastructure includes capturing the data, transmitting it to a server and visualizing it to public on display, internet or TV. A single tracking and/or visualizing technology will not satisfy the requirements of all air sport disciplines. Thus different tracking or visualizing technologies will need to be used. The NTEG envisions a modular system which will allow to connect the different technologies. In this system, different tracking systems can be used to collect and transmit data to a FAI Hub (server). This hub is able to understand the different tracking technologies and also can store the data in a database. The data is then transmitted to a visualization system that best fits the need of the discipline. Thus the FAI hub serves as translator between tracking devices and visualization systems. Storing the tracks in a database will allow further usage for promotion of the sport and statistics. Of course the legal framework of this storage will need to be clarified.

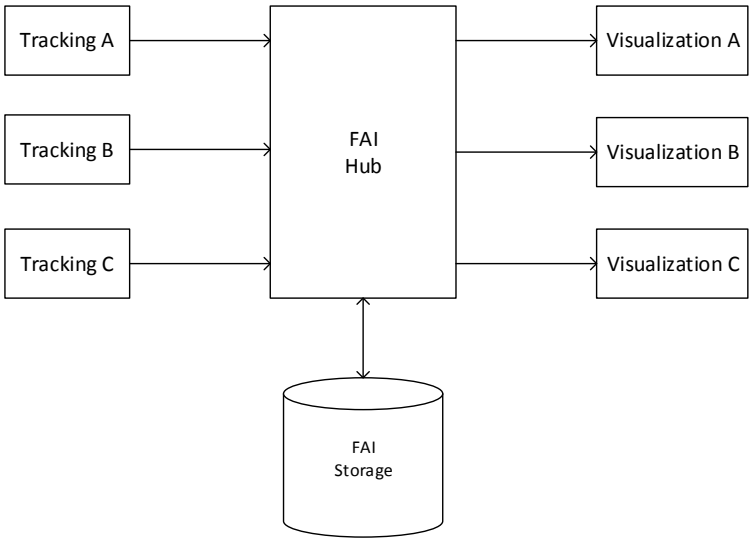

Figure 1 Schematic of the modular tracking system with the FAI hub

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With regard to tracking systems, NTEG is currently evaluating different systems that might be used. Basically three type of communication means can be separated. GSM (mobile phone) based systems, satellite based systems or proprietary radio based systems. GSM based systems often provide a cheap solution but lack connectivity in remote areas or when flying high above flat lands. Satellite systems provide connectivity (almost) everywhere on the world, but usually are very costly, especially for high tracking interval. Proprietary systems might also provide interesting solutions for specific disciplines. Some devices even offer the combination of several transmission systems. An interesting approach based on proprietary radio communication is to do tracking based on FLARM data which is currently investigated by NTEG.

Apart from tracking solutions the NTEG is also advising the FAI on other technological means to make the sport more visible such as possibility to live transmit pictures and video from the aircrafts to screens or to the internet. The challenging aspect of this is to find a solution with good picture quality and required transmission range while keeping cost in a reasonable range.

Marc André, Point of Contact NTEG, 16.9.2014