Fédération Aéronautique Internationale

106th FAI Annual General Conference
Antalya, Turkey
19 and 20 October 2012

Agenda # 8.3 – Report on the FAI Expert System and Expert Groups

Agenda

➢ General Overview

1.  General overview
1.1. The requirement for an "FAI Expert System"

Following our strategy, the «FAI-Expert System» covers 11 important areas:

AIRSPACE
REGULATION
NAVIGATION
FACILITIES
IT
SAFETY
NEW TECHNOLOGY
MARKETING & COM
EDUCATION
ENVIRONMENT
MEDICO-PHYSIOLOGICAL
1. General overview

1.2. The structure for the “FAI Expert System”

**Agenda # 8.3 – Report on the FAI Expert System and Expert Groups**

**8 Expert Groups**

- **Airspace** Expert Group AEG
- **Navigation** Expert Group NEG
- **Safety** Expert Group SEG
- **Regulation** Expert Group REG
- **Airport Facilities** Expert Group FEG
- **New Technology** Expert Group NTEG
- **IT** Expert Group ITEG
- **Marketing and Com.** Expert Group MCEG

**3 Technical Commissions**

- **Education** TC CIEA
- **Environmental** TC EnvC
- **Medico-Physiological** TC CIMP

**Techn. expertise and general support:**

- for all Bodies in FAI
- as FAI-Observers by international Organisations like ICAO, IFAC/TA, IATA, Eurocontrol, etc

**Philosophy:**

A group of experts working on demand when required, with the option for quick reaction

**Organisation:**

- 1 Point of Contact (PoC) as Coordinator
- 5 - 10 identified Experts
- working by e-mail, if required by skype

**Tasking and reporting Processes:**

- Tasking for specific issues by FAI HO to the POC
- Reporting from POC to FAI HO, Secretary General / EB

**Output:**

Information & Results to all FAI members (by HO)

---

1. General overview

1.3. The Expert Groups in the “FAI Expert System”

As reminder: How are the Expert Groups working

**Philosophy:**

A group of experts working on demand when required, with the option for quick reaction

**Organisation:**

- 1 Point of Contact (PoC) as Coordinator
- 5 - 10 identified Experts
- working by e-mail, if required by skype

**Tasking and reporting Processes:**

- Tasking for specific issues by FAI HO to the POC
- Reporting from POC to FAI HO, Secretary General / EB

**Output:**

Information & Results to all FAI members (by HO)

---

1. General overview

1.4. The benefit of the “FAI Expert System”

- FAI is able to handle a lot of new challenges with an Expert-System of 8 Expert Groups and 3 TC’s
- Very efficient system with clear policies, defined goals, mid-term action plans and standardised Tasking & Reporting processes
- Higher output in a wide field of technical expertise in favor of EB, NAC’s, ASC’s, without increasing costs
- Information & results to all members at the same time by Head Office
- Strengthen the organisation through more activities in airports and «showing the flag of airports» with observers in international aviation organisations!

---

2. Actual situation

6 Expert Groups are established and started operations!

- Total 36 Experts from 15 countries ensuring a high-level international spectrum
- The overall documentation is ready for the 6 Expert Groups
- The FAI EB monitors closely all important activities
- EB-directors are coaching/supporting specific actions:
  - Otto Lagerhus (Safety; Regulation)
  - Beat Neuenschwander (Airspace; Navigation)
  - and Sec Gen: Jean-Marc Badan (IT; New Technology)

- A «Top Level Letter» from FAI President to International Aviation Organisations was sent out «to show the flag!»

---

2. Actual situation

- The document status:
  A) Framework for FAI Expert Groups:
  B) Policy and Goals for:
    - Airspace
    - Navigation
    - Safety
    - Regulation
    - IT
    - New Technology
  C) Lists of Experts for all 6 Expert Groups established
    (6 Expert Groups, 36 Experts, 15 Countries)
2. Actual situation

Today: The Expert System is in operation with 6 Exp.Gr. and 3 TC’s!

FAI Expert-Groups
- Airspace       * Expert Group        AEG
- Navigation    * Expert Group        NEG
- Safety        Expert Group        SEG
- Regulation           Expert Group        REG
- New Technology Expert Group        NTEG
- IT Expert Group ITEG
- Marketing & Comm. Expert Group MCEG
- Facilities   Expert Group FEG

FAI Technical Commissions
- Education                    Techn. Comm.   CIE
- Environmental             Techn. Comm.   CIE
- Medico-Phisiological  Techn. Comm.   CIMP

Agenda # 8.3 – Report on the FAI Expert System and Expert Groups

3. Tasks and first results - FAI top level action

Letter to International Aviation Organisations
FAI’s position:
…The sky is big enough for us all. It requires a sensible approach by airspace administrator using, where necessary, the best available technology to allow fair access for all.

…The FAI is becoming increasingly concerned by the negative influence of regulation on air sports. The FAI, as the World Air Sports Federation, has therefore decided to take on a greater role in regulatory matters.

… we will appeal to our national member organisations to take more active position with national authorities when subjects such as airspace concepts …

Very positive feedback!

- ICAO and IATA welcome an increased role from FAI in regulatory matters and invite FAI to take part in the CDM process (Collaborative Decision Making)
- Eurocontrol invites FAI to join the « Agency Advisory Board forum»
- IAOPA sees it as an opportunity and starting point for cooperation between FAI and IAOPA

The first step of the overall GOAL: «to show the Flag» is achieved!
3.1. Airspace - initial Tasks given:
1. Analyse the ICAO meeting structure affecting airspace and make proposals to FAI HD for effective FAI monitoring and representation.
2. The Collaborative Decision Making technique from ICAO: Is it a useful tool for FAI and its members?
   a) what are the criteria to become part of the CDM process in relevant area
   b) what positive impact can a proactive use of CDM have for FAI and its members
3. Provide suggestion for further tasks, based on their experience and expertise. Highest priority should be given to airspace matters of global importance impacting airport activities.

3.1 Airspace – Report / Proposals
First result: good report with analysis and proposals from AEG!
1. The ICAO meeting structure; proposal from AEG?
   FAI should make a bid to be included in the NGOs that are acknowledged by ICAO. An FAI representative needs to be funded on a long term basis. An annual report should be made on ICAO matters to the FAI General Conference.
2. ICAO’s «Collaborative Decision Making technique», is this a useful tool?
   - At the NAC level: Encouraging good relationship between NAC and NAA.
   - Countries with national committees (NAA: commercial, military and sporting organizations represented) show positive results!
3. Further tasks? No further proposals from AEG has been provided.

3.2 Navigation – initial Tasks given:
1. ICAO Question structure for navigation matters and make a proposal to FAI/HO for effective FAI monitoring and representation.
2. Analyse the avionic equipment market for traffic awareness/collision warning systems for light/sport aircraft («situation awareness devices»), with the objective of producing an overview of available alternatives and their merits for various air sport activities.
3. NEG should provide a proposal for further tasks based on their experience and expertise. Highest priority should be given to navigation matters of global importance impacting airport activities.

3.2 Navigation - Report / Proposals
First results: good report with analysis and proposals from NEG!
1. ICAO Question; Proposal fromNEG = Same answer as for AEG
   FAI should make a bid to be included in the NGO’s acknowledged by ICAO.
2. Analyse the avionic equipment market for traffic awareness and collision warning...
   Some results have been covered in past CANS minutes and their Annexes. The point should also be made that the device needs not only to be suitable for Sports aircraft in terms and cost and power drain, but also needs to be approved by the NAA’s. Technical approval process can be lengthy and costly.

3.3 Safety – initial tasks given

The IPC letter – FAI evaluation and suggested response
- Evaluate the content and suggestions in the letter from IPC (attached as WP to the group) and, if applicable, make recommendations for changes in the FAI Safety Expert Group policy statement.
- Overview of FAI Safety Work
  - Produce a broad overview of the safety work taking place in the various Air Sport Commissions (ASCs) and provide suggestions for effective cooperation and communication between such ASCs in order to benefit from being part of the FAI structure.

- Sat Nav: The most important long term development is the transition from radar-based ATM systems to satellite-based systems like US/GEPS, Russian GLONASS, European GALILEO and People’s Republic of China BEIDOU 2.
- CAT Growth: The huge forecast growth of Commercial Air Transport until 2030 should be recognised – ATM – Airspace Impact on Sport and recreational aviation:
  - This is a coming issue for AEG.
- ATM Rules and Procedures: The consequences of airspace violations by sport aircrafts could be very serious to our credibility with organisations such as NAA’s and ICAO, the main bodies that we need to influence in order to maintain freedom to operate in many parts of the world. An EB statement to this effect would be helpful and appropriate wording could also appear in top level FAI documents.

No further proposals from AEG has been provided.
3.3 Safety – Preliminary Comments - 1

- **Task 1: The IPC letter – FAI evaluation and suggested response**
  - The SEG notes the IPC views, as follows:
    - There is no doubt that the work of the IPC within the safety area is state of the art and probably a «best practice» within FAI.
    - However, there are still areas for improvement which gives the present wording relevance.
  - The SEG majority believes better wording could be found, satisfying the EB and IPC.
  - The SEG suggests that 2 Safety Experts are charged with drafting an alternative wording for the FAI Safety Policy.
  - This shall then be forwarded to the full SEG for approval / modification, and then to the EB for approval / modifications.

3.3 Safety – Preliminary Comments - 2

- **Task 2: Overview of FAI Safety Work – preliminary comments; work in progress**
  - The practice in the various FAI Air Sport Commissions vary widely.
  - The SEG has not found a high degree of commonality in approach to the safety issue.
  - The methodology and practices range from high focus/activity to little focus and no specific safety activities.
  - This must not be read as to mean there is no focus on safety as such; we have been identifying specific activities, and it should be noted that all of the FAI ASCs have «imbedded» safety in their operations.

3.4 Regulation – initial tasks given

- **Task 1: Major regulation threats to air sports**
  - The increase in user fees and/or the increased application of user fees.
  - The broad introduction of UAVs (imposing critical limitations on other activities).
  - Equipment requirement resulting from Next Generation / SES implementation.
  - Critical application of environmental issues.
  - Increased requirements for formal licensing of air sports persons to carry out their activities (medical, training, experience etc.).

- **Task 2: What actions are suggested by REG to minimize the effects of the regulatory changes identified in 1. above?**
  - The REG is of the opinion that the constant presence of the FAI views and lobbying at various levels of applicable regulators/organizations must be ensured.
  - Failure to ensure effective FAI presence/lobbying at international and regional levels may prove detrimental to air sport.
  - Stimulating NACs to lobby national authorities will also be an important success factor in ensuring our freedom to practise air sports.
  - FAI management (EB/ASCs/RVPs) must ensure relevant actions.

3.4 Regulation – Preliminary Comments - 1

- **Task 1: Major regulation threats to air sports**
  - The increase in user fees and/or the increased application of user fees.
  - The broad introduction of UAVs (imposing critical limitations on other activities).
  - Equipment requirement resulting from Next Generation / SES implementation.
  - Critical application of environmental issues.
  - Increased requirements for formal licensing of air sports persons to carry out their activities (medical, training, experience etc.).

3.4 Regulation – Preliminary Comments - 2

- **Task 2: What actions are suggested by REG to minimize the effects of the regulatory changes identified in 1. above?**
  - The REG is of the opinion that the constant presence of the FAI views and lobbying at various levels of applicable regulators/organizations must be ensured.
  - Failure to ensure effective FAI presence/lobbying at international and regional levels may prove detrimental to air sport.
  - Stimulating NACs to lobby national authorities will also be an important success factor in ensuring our freedom to practise air sports.
  - FAI management (EB/ASCs/RVPs) must ensure relevant actions.

3.5 IT

- **Group started its operation in June 2012**
  - **First task is to:**
    - Analyze the possibility to open FAI data to the NACs, ASCs and event organisers.
    - Design a database that can be used for public access.
    - Extract data from the main database for public access.
    - Plan access rights for this data.
  - **Result will be a working interface to the current FAI data**
  - **The group will also act as advisor for FAI IT projects**
3.6 New Technology

- Group started its operation in August 2012

  First task is to:
  - Find a solution for live tracking, including presentation and scoring, that covers all FAI disciplines that can benefit from tracking
  - Establish minimum requirements for flight (technical) evidence

- Other goals:
  - Improve reliability of measurement methods
  - Report to ASCs and CASI of possible changes needed to sporting code because of new technologies

Other goals:
- Work has started by collecting experiences of live tracking projects of different disciplines.
- Matters that have to be taken into account are for example:
  - Data transmission coverage (satellite, GPRS, VHF etc.)
  - Data transmission and hardware cost
  - Legal restrictions
  - Linking data to existing applications i.e. scoring or simulators
  - Approaching technologies (i.e. ADS-B)
- The group will also act as reference in terms of electronic devices used in air sports.
- Results will be gathered as a reference document and recommendations to EB and ASCs

Agenda

- Planned actions for 2013

FAI Executive Board / Head Office:
- Letter(s) to ICAO, IAOPA and Eurocontrol
- Nominating FAI representatives in Int. Organisations
- Tasking Expert Groups with new issues
- Coaching/supporting/monitoring POC’s / Expert Groups
- Information about results to all NAC’s and Commissions

FAI Expert Groups:

**Airspace:**
- Establish a project plan to develop a quantitative assessment of how much airspace has been reduced, on a year to year basis, from air sports:
  - A mapping of where air sports are practiced
  - Computing the total air sports area
  - A time graph of how much of this airspace has been lost for our purposes during the last 10 years
- Establish a list of main criteria on airspace from the airports viewpoint, as tool for further discussions with respective authorities.
- ……

**Navigation**
1. Make a deeper study about the «sense and avoid» technology for UAV’s and the consequences for VFR traffic (needed equipment ?)
   - Info: A «top level briefing» to FAI is planned in summer 2013 about Sense and avoid live tests and first results in VFR airspace with the government and the national test facility in Switzerland
2. Establish a list about important criteria for future cockpit equipment in sports aircraft, to guarantee the airports development (light and low cost features) and to be accepted in new defined airspace structures
3. ……
4. Planned actions for 2013

SAFETY

1. Produce an overview of the safety work of the Air Sport Commissions (ASCs) and finalize a number of suggestions for effective cooperation and communication between such ASCs in order to benefit from being part of the FAI structure.

2. Finalize review of FAI Safety Policy and provide new/modified text and layout.

3. Continue refining the „Improved Safety through Shared Responsibility (ISSR)“ concept, a concept seen as a potential major development.

REGULATION

1. Based on the action suggested to meet the „Top 5“ regulation threats, provide advisory strategies to be used by FAI internationally, affiliated regional organizations and NAC/ASCs.

2. Establish closer ties with major international and regional players on the regulation arena, especially ICAO (w/ECAC), FAA and EASA (mainly through EAS); arrange discussion sessions between REG and EAS for info sharing.

IT and NEW TECHNOLOGY

First actions have not been achieved yet and will constitute the actions for 2013.

Conclusions

- The FAI Expert-System with wide aviation expertise is established and available at low cost.
- The Expert Groups are working - ready to take new assignments - waiting to assist you!
- FAI will be involved and more recognised by international aviation authorities aiming at sustainable development of airsport activities!