
JAA/FAA

SUMMARIES,
CONCLUSIONS, &
ACTIONS ITEMS

20th Annual JAA/FAA International Conference
Reykjavik, Iceland 29 May – 3 June 2003

TABLE OF CONTENTS

	<u>Page</u>
 <u>Thematic Day</u>	
1. Update on EASA.....	1
2. JAA after EASA.....	3
3. Contributions from FAA, Organisations and Associations.....	5
4. Evolving Concepts in CNS/ATM.....	7
5. Global Safety Initiatives.....	9
6. Safety Research.....	11
 <u>Thematic Workshops</u>	
1. CNS/ATM.....	13
2. Aircraft Security: Beyond the Flight Deck Door.....	17
3. Certification, Maintenance, and Operations: Strengthening the Process Links.....	21
4. Safety Initiatives.....	23

Code-Related Workshops

1.	Combined Flight Crew Licensing/Operations Workshop	27
2.	Combined Aircraft Certification/ Maintenance Workshop	31
3.	Flight Crew Licensing Workshop	35
3.	Operations Workshop.....	39
4.	Maintenance Workshop.....	43
5.	Aircraft Certification Workshop.....	45

Update on the European Aviation Safety Agency

<u>Presenters</u>	Thilo Schmidt , Chairman, EASA Management Board Michel Ayrat , Director, Air Transport, European Commission Alain Garcia , Chairman, EASA Advisory Board Interested Parties (ABIP) Salvatore Sciacchitano , JAA Committee Chairman Per-Arne Skogstad , JAA Board Vice Chairman
<u>Moderator</u>	Salvatore Sciacchitano , JAA Committee Chairman

Summary of Presentations

The update on the European Aviation Safety Agency (EASA) was opened by the Chairman of the EASA Management Board, Mr. Thilo Schmidt, who described the activities of the Management Board in the last months and the next steps required to have the Agency up and running by 28 September 2003. One important decision still pending is the appointment of the Executive Director that should be finalised by mid July.

Mr. Ayrat's presentation focused on the actions taken by the Commission in three main domains of activities in order to have the Agency working.

Physical establishment of EASA:

The Commission is providing support to the Agency, hosting the Management Board and hiring auxiliary staff to execute essential administrative functions.

Completion of regulatory framework:

The Commission is finalising, with the assistance of the JAA and its Member States, the development of the binding measures to be adopted by 28 September 2003 (implementing rules, certification specification, appeal process, fees and charges regulation, etc.)

Integration of the EU system in the international environment:

In the field of integration into the international environment, steps have been taken to maintain the Pan-European dimension of EASA, ensuring the participation of non-EU JAA Member States and to conclude bilateral aviation agreements with FAA and Transport Canada.

In his presentation Mr. Garcia addressed the role and functions of Advisory Board Interested Parties (ABIP) and described the priorities of the Board. He requested that EASA urgently establish the Safety Standards Consultative Committee to deal with EASA rulemaking contents and implementation. On the issue of the establishment of EASA, he asked that the Commission and the Management Board urgently publish a "road map" and associated schedules, practical modalities and instructions for the following activities:

- Rulemaking,
- Ongoing certification and validation programs, and
- Past certificates and approvals

Mr. Sciacchitano presented the Option 3 of a proposal developed by an ECAC/EC Task Force on possible models for future EASA/JAA relations and adopted by the ECAC Directors General in Yalta in August 2002.

Option 3 envisages the transfer of all technical activities under EASA, while JAA governing bodies would be maintained for the adoption of the decisions for the non-EU JAA Member States in the Airworthiness field and for all JAA Member States in the fields of Operations and Licensing.

Mr. Per-Arne Skogstad focused on the cooperation with non-EU Member States underlying the common objective of maintaining a Pan-European model in civil aviation.

Starting from the present situation concerning the membership of the two organisations, JAA and EASA, he presented the proposal developed by JAA to regulate the relationship between JAA and EASA in the transition period and to ensure the involvement of non-EU Member States in EASA.

Discussion Issues

None

Summary/Conclusions

None

JAA and EASA

Presenters **Klaus Koplin**, Chief Executive, JAA

Moderator **Salvatore Sciacchitano**, JAA Committee Chairman

Summary of Presentations

Mr. Koplin's presentation focused on the activities undertaken by JAA during the last two years in preparation for the establishment of EASA. These activities includes:

- Development of a Transition Plan;
- Establishment and management of 11 Core Groups;
- Analysis of possible models for future EASA/JAA relations; and
- Draft cooperation arrangements between JAA and EASA.

Views on possible future changes to the JAA organisation were also presented.

Mr. Koplin's second presentation focused on the status of JAA membership with a view on the impact of the May 2004 accession of ten new EU Member States.

Discussion Issues

None

Summary/Conclusions

None

Interventions on EASA from FAA, Organisations and Associations

Presenters **Paul Feldman**, Director, Europe, Africa, and Middle East Office, FAA/AEU-1
Jerry Mack, Vice President, Government and Industry Technical Liaison, Boeing
Claude Schmitt, Senior Director, Airbus

Moderator **Salvatore Sciacchitano**, JAA Committee Chairman

Summary of Presentations

Mr. Feldman's presentation highlighted the work undertaken by the FAA in preparation for the establishment of the EASA. He expressed optimism that the historic cooperative relationship that began with the National Aviation Authorities and the Joint Aviation Authorities will grow and improve once EASA becomes operational. At the same time he anticipated that many difficult challenges lie ahead. He indicated that FAA shares EASA's goals of increasing safety and reducing the economic burden on the aviation industry from redundant inspections, evaluations and testing during and after transition. He also expressed support for the following principles to be used during transition planning:

- There should be no safety gaps;
- The flow of products and services must continue uninterrupted; and,
- There must be cooperation and transparency in the development of rules, certification specifications and guidance materials.

He acknowledged the hard and complex work carried out thus far to inventory product approvals and many other transition issues. He expressed an appreciation for the coordination with FAA on plans that affect US products and services. He reiterated that FAA is a strong supporter of EASA and that FAA is prepared to negotiate a strong bilateral aviation safety relationship with the new partner. With that in mind the FAA highlighted those concerns that may impact on the ability to negotiate a full bilateral aviation safety agreement with the European Community.

Mr. Feldman indicated that FAA has proposed a two-stage assessment of EASA and the new European civil aviation regulatory system prior to concluding a bilateral agreement. Once this evaluation is completed, the FAA expects to enter into an interim agreement with the European Community that will temporarily retain existing bilateral agreements with Member States, recognise EASA as a safety partner, and provide a framework for an aviation safety relationship that will grow throughout the 42-month transition period. FAA's vision for such an agreement would include specific provisions for:

- Temporary retention of current safety bilaterals;
- Acceptance of prior approvals, existing delegation systems, etc.;
- Ability to enlarge the agreement commensurate with EASA's demonstrated technical competence;
- Strengthening the EASA/FAA relationship through technical working arrangements: and,
- Continued regulatory harmonisation and cooperation.

He also acknowledged that the challenges in the transition to EASA are numerous and complex. Therefore, EASA and all its stakeholders will need to make good use of the legislated 42-month transition period to ensure that Europe transitions successfully into a new aviation regulatory system.

Messrs. Schmitt and Mack, representing the aircraft manufacturers, expressed strong support for EASA and the safety, efficiency and globalisation goals of the Agency. They also indicated that, with only 17 weeks remaining before EASA becomes operational, there are many unknown and unresolved issues that need to be addressed. They cited, as examples, the requirements for importing aircraft to EU Member States and the establishment of a common set of technical requirements for the issuance of Certificates of Airworthiness. They highlighted that although there is nothing wrong with continuing to do business as usual, it is not the preferred option since the regulatory structure in Europe has changed. They urged that if current procedures are to be retained on a temporary basis – they need to be made official and documented.

They also outlined the manufacturers' expectations during and after transition. They are:

- Continued deliveries to and from Europe without interruptions;
- Streamlining of Post Certification activities;
- No change in agreed certification basis for ongoing projects;
- Minimal change to ongoing certification/validation programs;
- Acceptance of existing TCs by all EU member authorities;
- Recommitment to a streamlined validation process;
- Ensurance a 42-month transition period for maintenance;
- Continued commitment to harmonisation with FAA;
- Continued participation in CAST and JSSI;
- Continue commitment to embrace data-driven agenda; and,
- Standardisation of the risk management approach.

Discussion Issues

None

Summary/Conclusions

None

Evolving Concepts on CNS/ATM

Presenter **John McGraw**, Manager, Flight Technologies and Procedures Division, FAA/AFS-400
Dan Hawkes, Chairman of JAA CNS/ATM Steering Group
Chris Bouman, Airspace and Navigation Unit, EUROCONTROL
Peter Stastny, Safety Regulation Unit, EUROCONTROL

Moderator **Salvatore Sciacchitano**, JAA Committee Chairman

Summary of Presentations

Mr. McGraw presented a briefing to the plenary meeting, the “Evolving Concepts in CNS/ATM”, pointing out that these concepts involve all aspects of regulation. The main elements of the briefing included the Required Total System Performance (RTSP) concept, or the building of a CNS/ATM performance matrix for communication, navigation and surveillance. This could permit operations based on aircraft systems and service provider capabilities that satisfy the CNS/ATM performance matrix. Key to the presentation was a summary of on-going work, the need for harmonisation (in strategy development), and avoidance of divergent paths.

Mr. Hawkes presented a briefing on communication and surveillance activities in Europe. Notable was that his briefing reflected the points made in the FAA’s “Evolving Concepts” briefing – complimenting continuous harmonisation efforts between Europe and the US whilst recognising regional needs. Key elements of the presentation included the demand for additional VHF communication frequency assignments requiring an expansion of the 8.33KHz airspace in Europe, and an incremental path from Mode S Secondary Search Radar towards Automatic Dependent Surveillance technologies.

Mr. Bouman provided a concise briefing on navigation developments in Europe. He recapped the Basic RNAV (B-RNAV) implementation, the limitations of B-RNAV in the terminal area, and the planned implementation of Precision RNAV (P-RNAV).

Mr. Bouman noted that the EUROCONTROL Airspace and Navigation Team (ANT) had just reaffirmed the schedule for an ECAC consistent approach regarding RNAV in the terminal area. P-RNAV, where needed for high-density airports/areas was targeted for November 2004, and for remaining airports in April 2005. He also noted that some States plan to implement P-RNAV in advance of the November 2004 date. He reminded the conference participants that P-RNAV was a non-mandatory interim step towards RNP-RNAV that was targeted for not earlier than 2010. One key element of the presentation was the need to improve navigation data integrity. He noted that navigation data integrity requirements exist in JAA TGL-10 (P-RNAV) for “approved navigation data suppliers” or “for operators to conduct data checks themselves.” This topic would be addressed in greater detail in the CNS/ATM workshop.

Mr. Stastny provided a status report on the European Action Group for ATM Safety (AGAS) established by EUROCONTROL to address safety issues as the result of safety experience in Europe. The study did not identify any inadequacy in the existing ATM system of Europe. The group has been disbanded but its legacy can be found in the next steps to be defined in a Programme Management Plan of prioritised safety work, with specific lines of action based on AGAS conclusions.

Discussion Issues

An industry participant noted that there appeared to be “a disconnect” between Europe and the US on communications, specifically on the use of 8.33 kHz channels, and VDL Mode 2 versus VDL Mode 3 digital communications. The FAA recognised that there is some disconnect at this point; however, the FAA is committed to data link and US/Europe harmonisation, and there remains open discussions both internally and internationally. The collective goal is to develop a harmonised solution.

An industry participant queried whether the FAA and EUROCONTROL had revisited cost-benefit models for CNS/ATM programmes, taking into account the current difficult economic conditions. The FAA responded that it is being taken into account, especially for the next 5 to 10 years. RNP was given as an example where the FAA and industry were collaborating on where the most benefit can be obtained. EUROCONTROL noted that many of their discussions focused on addressing industry issues/problems. The economic recession in the aviation industry directly affects EUROCONTROL programmes.

A representative from the Association of European Airlines emphasised the need to address navigation data base integrity, and was pleased that this is a subject of the CNS/ATM workshop. Further, he noted that the approval of navigation database suppliers needed to progress urgently. He pointed out that it is not feasible for aircraft operators to manually validate the databases as implementation expands [TGL-10 refers]. Further, he urged that supplier approvals be mutually recognised.

Summary/Conclusions

Regional pressures inevitably lead to local solutions particularly in the timing of implementations. However, possibly with the exception of communication technologies, the longer-term US/European strategies for CNS/ATM are essentially convergent. This is particularly evident in the navigation domain.

In the current economic climate, the aviation community is looking toward both air navigation service providers and regulators to implement solutions that provide benefits with an economic return. Safety remains paramount.

The communications element, including spectrum use and data link, present new challenges. These challenges must be addressed as a collaborative effort between users and service providers.

Global Safety Initiatives

Presenters **John Gratton**, International Relations, CASA Australia
 Bill McIntyre, Aviation Safety Standards, CASA Australia
 Donald Sherritt, Aircraft Maintenance & Manufacturing, Transport
 Canada

Moderator **John Gratton**, CASA Australia

Summary of Presentations

Mr. Gratton, on behalf of the Pacific Countries, gave an overview of the new regional organisation (PASO - Pacific Aviation Safety Office) that was established by 8 countries, namely Kiribati, Papua New Guinea, Samoa, Solomon Islands, Tonga, Vanuatu and Fiji with Australia providing some support. The purpose of this organisation is to build on the knowledge provided by the ICAO USOAP programme on the status of safety oversight in each of these States and create economies of scale by using a common body of inspectors. All countries have adopted or will adopt the same set of rules (those of New Zealand), which facilitates the work. The total fleet to be surveyed is small, due to the fact that there are only a few aircraft for each country. Mr. Gratton suggested that this group in fact represents a common situation for small countries in the world and could therefore serve as a model for others. Resources are of course of the essence and help is sought from any contributor around the world.

Mr. McIntyre went on to describe the first-ever scientific-based study into aircrew fatigue (the Fatigue Risk Management Study). This study is a collaborative effort between CASA, the pilots' union, Qantas and academics from the University of South Australia. It consists of two components running over a three-year period. Part 1 looks at the quantity and quality of sleep that pilots obtain before, during, and after various flight schedules, and then at how long it takes for a pilots body clock to return to home time after international flights. Part 2 looks at how fatigue affects a pilot's ability to fly safely. Scientific methods are being employed to measure rest. These include: activity monitors, reaction times with PDAs (Palms), recovery rates with salivary melatonin tests, and the effects of fatigue on safety of flight with simulator sessions after trans-meridian flights. The study has gathered over 4000 days of data from a projected 8000 days and early results are showing that in-flight sleep and sleep at layovers is not as restorative as sleep at home. The study is receiving wide international interest and should lead to scientific-based methods of managing pilot fatigue.

Finally, Mr Sheritt described Transport Canada's recent approach on certification of Safety Management Systems. He gave a quick overview of an SMS' content, insisting on the idea that a single Accountable Manager (the ones who controls finances, usually the CEO) should be responsible for the company management systems. He indicated which regulatory activities had been tabled so far and stated that there had been a need to amend the Aeronautics Act to protect safety data while making the

SMS a regulatory requirement. Many companies are in the process of understanding that they already have many components of an SMS in existence, but that the latter needs to be integrated. Final conclusion was that we owe it to the travelling public not to compromise on Safety!

Discussion Issues:

PASO is using one common set of regulations, those of New Zealand. However, the latter is not yet a member of PASO. It was explained that most of the PASO members had already adopted New Zealand' regulations which contain a mix of FARs and JARs. Australia is in the process of rewriting its regulations and could therefore not serve as a useful model. One participants asked what assistance can be brought to PASO by this conference and more individually by FAA or JAA.

It was indicated that temporary assignment of experienced personnel, as well as contributions, would be welcome.

Which use is going to be made of the study on pilots' fatigue ?

At the present stage, this will allow better management of pilots activity.

While SMS is now a regulatory requirement, one participant asked whether Quality Management Systems would become regulatory requirements. A negative answer was given to that question.

One participant questioned how the efficiency of an SMS is monitored. No firm answer was given. It would appear, however, that there should be a beneficial effect on the overall performance of the company and – as expected – on Safety itself.

Workshop Actions and Conclusions:

None

Safety Research

Presenter: **Dr. Hazel Courteney**, Research Coordinating Committee

Summary of Presentation:

The Research Coordinating Committee is made up of members from the JAA, FAA, and Transport Canada. Dr. Courteney's presentation focused on accomplishments of the coordination team and its future work program. The previous work program focused in three areas: Icing, Cabin Safety, and Human Factors.

The Icing and Cabin Safety initiatives have both been highly successful and it was proposed that they continue in the future. It was even noted that cabin safety initiatives have included participants from countries other than those represented on the Coordinating Committee, thereby achieving more global cooperation. The Human Factors initiatives have been less successful, however, mainly due to availability of dedicated staff and the broad definition associated with human factors. As such the Coordinating Committee has decided to terminate this initiative and the associated responsibilities will now be with the JAA Human Factors Steering Group. (FAA participates in this JAA Group.)

In looking to the future work program, the Coordinating Committee proposed the addition of Advanced Materials and, in the near future, they plan to invite participation in the new research technical team. They also considered adding Passenger Health and Event Databases to their future work program. However, this subject is complex and responsibilities/boundaries have not been clearly defined. As a result, the Coordinating Committee has decided that it would not be appropriate to address this subject at this time.

For more detailed information, the team's Charter as well as its Report and Recommendations were provided to the conference participants.

Discussion Issues:

None

Actions and Conclusions:

Dr. Courteney ended her presentation indicating that, unless objections were received from the participants, the Icing and Cabin Safety initiatives would continue and a new team would be formed to address Advanced Materials. No comments were received.

CNS/ATM Workshop

- Chairs** **Dan Hawkes**, JAA CNS/ATM Steering Group Chairman
John McGraw, Manager, Flight Technologies and Procedures
Division, FAA/AFS-400
- Presenters** **Chris Bouman**, Airspace and Navigation Unit, EUROCONTROL–
RVSM
Bruce DeCleene, Avionics Systems Branch, FAA/AIR-130 –
Transitioning to a Performance-Based Airspace System
Dan Hawkes, JAA CNS/ATM Steering Group Chairman – Database
Integrity
John McGraw, Manager, Flight Technologies and Procedures
Division, FAA/AFS-400 – Electronic Flight Bag Initiatives

Summary of Presentations:

Mr. Bouman presented the current status of RVSM from both a European and US perspective. In principle, the major elements of RVSM implementation included: extensive co-operation between all stakeholders, central co-ordination & progress tracking; extensive awareness activities, especially towards aircraft operators and pilots; the early availability of RVSM compliant aircraft; the need for one common basis (including guidance, manuals, training support material); ATC system modifications, Letters of Agreement, ATC training, RVSM versus non-RVSM transitions; and a pre-implementation safety case. He pointed out the need for authorities to be alert to unapproved aircraft entering RVSM airspace and the need to coordinate when airspace monitoring identifies a potential non-compliance.

Mr. DeCleene presented the current strategies concerning navigation, including the concept of transitioning to a performance-based airspace system from a US and European perspective. He noted the significant similarities in the evolution of navigation strategies. Mr. DeCleene stated that Wide Area Augmentation System will be commissioned for the US on 10 July 2003.

Mr. Hawkes presented some of the issues associated with database integrity. He noted that today, each 28 days of the AIRAC cycle introduces “new” errors. He covered the following areas: aeronautical data chain processes, navigation data origination, navigation data preparation, database integration, and the role of the aircraft operator, standards, and regulatory oversight. He pointed out that the problem of data integrity was an issue on the critical path to Precision RNAV (P-RNAV) and RNP-RNAV implementation. He mentioned the development in EUROCONTROL of an electronic AIP that would offer higher integrity.

Mr. McGraw presented Electronic Flight Bag Initiatives including current European and US considerations and concerns. He briefed the status of recently published FAA Advisory Circular (AC) 120-76A. Mr. McGraw noted that the intent was not to address CNS/ATM functionality in AC 120-76A, since guidance for that functionality has

already been addressed in other material. The AC notes that CNS/ATM functionality could be added to the EFB using existing CNS/ATM guidance material.

Discussion Issues:

RVSM:

Some industry representatives expressed concerns that recurring maintenance costs may not have been adequately considered for DRVSM implementation. The FAA confirmed that consideration had been given.

Today, different mitigation procedures are necessary for RVSM (for example, procedures for oceanic airspace compared to continental). It was agreed that common procedures need to be applied for the same types of airspace (for example radar versus procedural airspace). A similar issue is also applicable to the use of data link. The IFALPA representative requested more consultation with the pilot community on procedural matters.

The conference participants were also informed that different TCAS MEL policies exist and that national airspace regulations may also affect dispatch decisions. The JAA policy for MEL dispatch is a 10-day fixed period without extension. The FAA has a three-day dispatch policy with provisions for extensions that can be obtained readily via telephone. Other national airspace regulations also exist without this flexibility for extension. Ideally, dispatch should be set in the operational regulations, not as an airspace regulation. In 2005, when TCAS regulations will be applicable to General Aviation (GA), there is a need for further consideration of dispatch policy recognising that GA does not have the same resources as air carriers. A harmonised policy is needed that should be pursued through ICAO.

Concerning the impact of RVSM on TCAS, the conference participants were informed that discussion in the ICAO OPS Panel on the issue of pilot intervention through the autopilot to prevent ACAS/TCAS RAs led to considerable debate. It was recognised that modifying the selected vertical rate of the autopilot can disable the altitude capture function. The concern expressed was that this could present an increased risk of altitude bust. There was no consensus in the ICAO OPS Panel that pilot intervention was the best solution.

Performance-Based Airspace System:

A concern was raised that, while the US and European navigation strategies are similar, the terminology used to describe these operations varies widely (for example, Basic RNAV, RNP-4, RNP-5, Precision-RNAV, RNP-1, RNP RNAV). It was noted that the harmonisation of detailed criteria was ongoing, and consistent terminology could only be used when the criteria is consistent. The community faces a similar terminology issue for approach operations, with the advent of ICAO Annex 6 approach procedures with vertical guidance (APV). A related issue is the use of PANS-OPS versus TERPS, and that there are advantages if consistent obstacle clearance criteria are applied. The FAA noted that TERPS and PANS OPS criteria for RNP operations are very similar and that harmonisation is a common goal. The recently published

FAA Order (8260.51) is consistent with PANS OPS material developed by the ICAO Obstacle Clearance Panel.

While discussing the aircraft capabilities that would be required to operate in the planned US navigation environments (e.g., RNAV level 1 terminal area departure procedure), a question was asked concerning the compatibility of GPS and GPS/WAAS equipment. The FAA responded that such equipment was generally compatible with the planned operations, but there are some limitations such as curved-path procedures.

Database Integrity:

A concern was noted with the quality of navigation data, specifically in relation to meeting the integrity requirements of ICAO Annex 14. A EUROCONTROL study of State data, e.g., Aeronautical Information Publications (AIP), and Military AIPs, had found sufficient inconsistencies to question the confidence of implementing P-RNAV and RNP-RNAV. The point was also made that if State data is not good enough, then there is little that an operator can do mitigate any errors.

The representatives for aircraft operators urged that action be taken to correct this situation to relieve the burden of data validation by operators. The representative of the Association of European Airlines stressed their position [as mentioned in the plenary session] that from the airlines perspective, qualifying/certifying the navigation data suppliers was a necessary step.

Representatives of the regulatory community shared the belief that the implementation of RTCA DO-200A/EUROCAE ED-76 will improve the situation. Further, data suppliers are receptive to regulatory involvement as this would be more efficient than the multiplicity of audits currently being performed by aircraft operators.

Electronic Flight Bag Initiatives:

An industry representative raised a concern that the certification policy in FAA AC 120-76A for EFBs implied that installations could only be accomplished as a major alteration to type design. The FAA clarified that this was not the intent, and that installations could be a minor alteration depending on the specific characteristics of the installation.

The CASA representative noted that information on human factors concerns was not presented, and they have identified this as a significant concern for EFBs. The FAA and JAA pointed out that a human factors evaluation/process is built into the operational evaluation process.

Workshop Actions and Conclusions:

Conclusions:

1. CNS/ATM harmonisation needs to consider the operational (pilot) perspective. Common procedures need to be applied for the same types of airspace (for example, RVSM procedures in radar versus procedural airspace).

2. The European and US navigation strategies are largely consistent, however, additional harmonisation of the specific criteria and implementation schedules is desired.
3. Timely approval of data suppliers is an important component for implementation of safe RNAV procedures.
4. FAA and European practices for EFB are, for the most part, closely aligned. We can expect significant growth in the use of the EFB.

Actions:

1. FAA to review DRVSM operational procedures to determine whether changes can be made to achieve greater compatibility with corresponding continental airspace procedures used elsewhere.
2. National authorities should address the issue of differences in TCAS dispatch provisions and the overlap of airspace and operational regulations. (This may be accomplished through the ICAO Operations Panel).
3. FAA and JAA should pursue mutually recognised solutions that would deliver navigation databases of increased integrity whilst relieving the validation burden on the aircraft operator.
4. FAA to review the certification guidelines in AC 120-76A for Electronic Flight Bag to ensure that they allow installations as Minor or Major alterations, as appropriate.

Aircraft Security: Beyond the Flight Deck Door

Chairs: **Mike Harrison**, JAA Assistant Operations Director
 Yves Morier, JAA Regulations Director
 Vi Lipski, Manager, Transport Airplane Directorate, FAA/ANM-100
 Matt Schack, Manager, Air Transport Division, FAA/AFS-200

Presenters **Yves Morier**, JAA Regulations Director
 Vi Lipski, Manager, Transport Airplane Directorate, ANM-100
 Matt Schack, Manager, Air Transport Division, FAA/AFS-200

Summary of Presentations

1. JAA Security Regulatory Overview

A status was provided for the JAA rulemaking that has been completed and for that still in progress. The basic requirements for a reinforced flight deck door are complete. NPAs 25D-336 and 26-16 were published as final rules on 1 May 2003.

NPA OPS-30, which addresses the incorporation of the requirements of Amendment 27 to ICAO Annex 6, should be adopted by the JAAC 3 June 2003. The NPA addresses, amongst other things, the means to monitor activity outside the flight deck door. The JAA is working on interpretative material to assist in clarifying what is meant by "means for monitoring" in the form of a temporary guidance leaflet, TGL-35. This TGL will provide additional guidance as agreed by the Operations Sectorial Team (OST) and should be finalized soon.

JAA has tasked a working group to develop policy related to MMEL for the flight deck door system. The CAA UK policy has been used as a starting point. The policy is expected to be published in the near future.

There are several additional rulemaking actions planned to address specific issues that require clarification.

- NPA 25B-346 was planned to introduce ACJ material to 25-772(c) for locking/unlocking of the door from each pilot's station. After internal JAA consultation with the RST, it has been decided not to issue this NPA as NPA 25D-336 introduced into JAR 25 a reference to the FAA policy memo regarding flight deck doors. This policy memo provides clarification on the issue.
- NPA 26-19 introduced the requirement for the ability to lock/unlock the door from each pilot's station. This NPA is planned to be issued for consultation on 1 July 2003.
- NPA 26-18 is planned to address the issue of dual pilot incapacitation. This subject was raised as a result of the written consultation procedure of NPA OPS-30. The JAA has received many comments that the locking of the door

affects the emergency procedures and the ability of the cabin crew to access the flight deck. This may prevent the cabin crew from assisting the flight crew in the event that they are incapacitated during an emergency. Accident data was presented indicating that this may have been a factor in past accidents. The JAA has made the determination that it is necessary to publish this NPA and solicit formal comments on the issue in order to make a determination as to how it should be addressed. If this NPA is adopted, implementation is proposed to be three years after publication of the final rule.

2. Aircraft Security: Beyond the flight deck door

FAA Presentation:

The FAA acknowledged the significant effort by the authorities and industry in achieving the 9 April 2003 compliance date for the reinforced flight deck door requirement. The presentation focused on the continuing security efforts.

The FAA has a Part 25 notice of proposed rulemaking (NPRM) in work to adopt the reinforced door requirements to the areas surrounding the flight deck, e.g. bulkhead, ceilings and floor. The FAA is also moving forward on eight additional design for security requirements. Seven of the eight issues have completed the ARAC process with consensus and FAA is awaiting the formal transmittal of the recommendations. The final issue, design to facilitate searches, remains under discussion.

An NPRM regarding the continuous operation of transponders was issued on 8 January 2003. The comment period is complete. Comments from industry were not supportive of this rule. Many concerns were expressed regarding inadvertent activation and the consequences thereof. The FAA is in the process of reviewing the comments and determining the next steps.

With regard to monitoring, the FAA is working to emulate ICAO and JAA actions. An NPRM is planned to be published in the near future.

The issue of lethal and non-lethal weaponry was presented. This issue falls under the auspices of the Transportation Security Administration (TSA). The US Congress took up the issue and the carriage of lethal weapons was authorised through the Homeland Security Act. The use of non-lethal weaponry is still under study. TSA issued standard operating procedures on 18 April 2003 regarding Federal Flight Deck Officers (flight deck crew specially trained to use lethal weapons). Flight Standards has taken the action to issue a series of Notices to make the TSA information available to Flight Standards inspectors

With regard to flight deck access, the FAA has taken the path of providing general guidelines rather than mandating exactly what the operators will be required to do. This will allow the operators flexibility in implementing the requirements. Access on all cargo airplanes has also been an issue. The current plan is to develop a comprehensive security program for all-cargo airplanes that would be approved by TSA.

Air Crew training is an ongoing initiative. TSA has overall responsibility for security training while FAA has the responsibility for safety training. FAA and TSA are continuing to work jointly in developing the continuing training requirements.

Discussion Issues:

AEA made a statement to JAA that they were not happy with NPA OPS-30 and the process of how it has been dealt with by the OST. They indicated a concern with the feasibility of implementing the monitoring portion of the NPA by November 2003. They suggested the need for at least three years to implement. In addition, they expressed a concern that a TGL is not the proper method to establish an implementation date. They believe that it should be mandated for non-EU operators flying into Europe. Finally, they again stressed the point that European governments should assist with funding these security related measures.

An NAA representative seconded the concern related to the short implementation timeframe for the monitoring requirement. In addition, a concern was raised regarding the use of the term "means of monitoring" .

JAA indicated that the NPA OPS-30 was discussed extensively within the OST and RST. The issue has had due process taking into account the need to issue the NPA as quickly as possible in order to support the ICAO timeframe. It was agreed that this issue would be brought before the JAAC, however consideration will still be given to meeting the ICAO date. The term "means of monitoring" will also be addressed by the JAAC. With regard to the application of the requirement to airplanes flying into Europe, the JAA does not have an equivalent to FAR 129, therefore there is no mechanism for the JAA to impose such a requirement. JAA indicated that they could not address the funding issue.

In response to a question on what the FAA expects to issue in terms of monitoring, the FAA did not comment since the rulemaking is in process. The intent, however, is to be consistent with ICAO and the JAA.

A question was also asked regarding the fact that many measures have been taken related to on-board security threats. Specifically, what are the FAA and JAA doing with relation to external threats (i.e. missiles)? The JAA does not have any specific activities in this area. The FAA responded that they are not engaged in any anti-missile activity. Any proposed certification projects are evaluated on a case by case basis. If necessary, this issue will be addressed at a US government level.

Mandates from TSA are causing a concern to the aviation community. TSA has issued mandates that physically change the airplane (e.g. curtains, placards) and a question was asked as to how this is coordinated with the FAA to ensure that any airplane interface issues are addressed? TSA is a developing agency with a strong law enforcement base. The FAA is working with TSA to create better coordination in the security areas related to the design and operation of the airplane. Industry followed up with a request for a process in which they can participate in reviewing new TSA requirements prior to their issuance.

This question was also raised on the JAA side regarding the possibility of better coordination between the aviation community and the security community responsible

for determining the threat assessment. The JAA concurred that there is a need for better communication and agreed to take this as a recommendation from the workshop. In the meantime this does not preclude communication taking place at a national level.

A question was raised as to whether TSA will have a mechanism similar to FAR 129 to impose requirements on non-US aircraft and how these requirements would be provided to the operators. The FAA agreed to take this concern back and provide it to TSA.

An issue was raised regarding the security threat created by unmanned vehicles. JAA has set-up a task-force to prepare a concept on UAV regulation. This concept will also address security issues for UAV. Some of these issues are within the control of Aviation Authorities (e.g. the operator must remain in control of the UAV); some are not (e.g. Control of sales, physical protection of ground control centers).

Workshop Actions and Conclusions:

It is clear that there is still a great deal of concern with regard to monitoring. On the JAA side, this concern will be taken to the JAAC. The FAA is still in the process of developing an NPRM. FAA and JAA have agreed to coordinate their activities on monitoring means.

The other major issue identified related to the coordination between the security and safety communities. Both the JAA and FAA will look at the recommendation to improve coordination between those agencies who define security threats and those who have to implement the protective measures. In addition, representatives from security, both US and Europe, will be invited to join the workshop next year.

Certification, Maintenance, and Operations Workshop: Strengthening the Process Links

Chairs

Yves Morier, JAA Regulation Director

Dave Hempe, Manager, Aircraft Engineering Division, FAA/AIR-100

Dave Cann, Manager, Aircraft Maintenance Division, FAA/AFS-300

Presenters

Ruth Harder, Delegation and Airworthiness Programs Branch,
FAA/AIR-140

Yves Morier, JSSI, The Occurrence Data Analysis Specification
Group (ODAS)

Summary of Presentations

Two presentations were made in this workshop. The FAA (Ruth Harder) gave an overview presentation of the Certification Process Study (CPS) Response Team Activities. The presentation covered a brief history of CPS initiative, a status update of the recent progress made by the Aviation Rulemaking Committee (ARC), and lastly touched upon international collaboration opportunities for the sharing of safety data. It was reported that the CPS Response ARC had completed phase I (strategic planning), and that phase II (detailed planning) was in work.

A brief status of each specific CPS change area was given. However, it was noted that due to resource issues, some change area team leads were slow to gain commitment from their proposed team members, thus resulting in a late start of the team meetings. As a result of these resource issues, the CPS Oversight Board recently redirected (delayed) certain initiatives within some of the change areas.

A second presentation was given to identify the connections between the European Coordination Centre for Aircraft Incident Reporting System (ECCAIRS) and the Occurrence Data Analysis Specification (ODAS) group of the JAA Safety Strategy Initiative.

Discussion Issues:

It was stated that the issue of strengthening the process links between Certification, Maintenance and Operations is an important issue to also tackle in the JAA environment. Therefore, it was suggested that the JAA should join the efforts made by the FAA.

It was pointed out that on the Human Factors Integration (change area 2), the approach (which proposes three separate sub-teams) may not be optimal when compared with an overall approach which looks at all perspectives simultaneously. It was agreed that FAA would take this perspective back to the Response Team for review.

It was questioned how the EC reporting directive, the data analysis and the JSSI activities fit within the EASA/ IR system. It was noted that the Regulatory Interaction Working Group formed by the EC in relation to the transition from JAA to EASA addressed the subject and made proposals.

It was proposed that ATM should join in the future activities relating to strengthening the process links with the different disciplines.

Workshop Actions and Conclusions:

Action:

Consider a change in format of such workshop to generate more debate on such a significant issue.

Conclusion:

The workshop showed support for the continuation of work on strengthening the process links.

Safety Initiatives Workshop

Chairs: **Klaus Koplín**, JAA Chief Executive
 John Hickey, Director, Aircraft Certification Service, FAA/AIR-1

Presenters: **Klaus Koplín**, JAA Chief Executive
 John Hickey, Director, Aircraft Certification Service, FAA/AIR-1

Summary of Presentations

Commercial Aviation Safety Team (CAST)

Mr. Hickey indicated that there was good synergy between JSSI and CAST.

The White House Commission on Aviation Safety and the National Civil Aviation Review Commission provided the impetus for CAST to identify and implement actions to reduce the top contributors to accidents. The strength of CAST is the teamwork between industry, government and other entities. The CAST goal is to reduce the US commercial fatal accident rate by 80% by 2007 and work with international partners to reduce the overall global accident rate.

The structure of CAST includes Joint Safety Analysis Teams (JSATs) to analyse data, Joint Safety Implementation Teams (JSITs) to identify interventions, and Joint Implementation Measurement Data Analysis Team (JIMDAT) to assess effectiveness and ensure an integrated plan.

CAST has developed an integrated safety plan with 46 safety enhancements that provide the best safety improvement for the resource expended (safety "sweet spot"). Areas addressed by the safety plan include runway incursions, controlled flight into terrain (CFIT), approach and landing accident reduction (ALAR), Loss of Control (LOC), and uncontained engine failures. While there are a number of design mitigations, such as Terrain Avoidance Warning Systems (TAWS), a number of the enhancements focus on improved operating and maintenance procedures, crew resource management, training, standard operating procedures, and development of risk management tools. Focus on creating a safety culture is also an important cross-cutting enhancement.

It estimated that there will be a \$540 Million / year savings by introducing the enhancements, in addition to a 64% risk reduction through 2007. The use of fatal accidents is not an adequate metric for assessing the effectiveness of the plan and CAST will be identifying indicators at a level below the accident level that will be used as the mechanism for measuring program effectiveness.

CAST is assisting other international organisations in developing interventions appropriate to other geographical regions. CAST future work involves continued execution of the approved safety plan, measuring the plan effectiveness, improving

assessment methodologies, continue influence on world wide safety programs, and developing R&D initiatives to support the plan.

Update on the JAA Safety Strategy Initiative (JSSI)

The overall objective is continual reduction in the annual number of accidents. For the time being JSSI is concentrated on large transport airplanes. JSSI has two elements: as historical approach that works hand in hand with the CAST and a “predictive approach” (Future Aviation Safety Team – FAST) to address future risks.

The historical approach identified many common issues as CAST except there was also the recognition of design related and occupant safety and survivability.

The predictive approach focuses on identifying changes in the aviation system and further identifying the hazards resulting from these changes. Finally, interventions are identified to reduce the hazard.

The intervention schedules are proceeding for CFIT/ALAR but with some delays. In the area of Loss of Control, occupant safety and survivability action plans are being progressed, again with some delays due to other workload considerations. On the design related initiatives, one of the recommendations (tyre/wheel burst) will be addressed in the Harmonisation Work Programme. JSSI plans to join the CAST team for weather

The Occurrence Data Analysis Specification (ODAS) is a European level activity to support the ECC-AIRS data exchange system between EU member states.

In working with EUROCONTROL, a comprehensive action plan for prevention of runway incursions is at an advanced stage.

FAST has established a methodology to identify the changes (and their effects on safety) to the aviation system. The Analytical Hierarchical Process (AHP) was used to identify the top 20 changes with the most important safety implications. The top two of these are flight deck automation and new concepts for ATM. The focused analysis of the first one is closed and there are four general themes emerging: Air Ground Space System; Crew automation issues; general threats; and absence of the human agent. FAST has developed a method for assessing the system wide impact of future changes to the aviation system and FAST promotes the concept of looking forward. The report on flight deck automation has been sent to the JSSI Steering Group on 27 May.

In conclusion, the prioritisation of initiatives are complete, but resources are scarce to implement and some delays are being accounted. JSSI is in coordination with other activities within CAST, EUROCONTROL, ICAO, etc. It is hoped that JSSI is a tool that will be utilized by EASA.

Discussion Issues:

AECMA – US and European industry fully supports risk management initiatives like JSSI and CAST that focus resources on the largest contributors of risk and hopes that it will continue with changes in Europe, i.e. EASA.

A question was raised on the involvement of airports in the Runway incursion program. It was confirmed that airports have been involved in the development of the program.

Workshop Actions and Conclusions:

Mr. Hickey believes the next stage of CAST is a challenge as we go beyond acting upon accidents to identifying future issues and interventions based on data that are precursors to accidents.

Mr. Koplín found that the activity of JSSI and CAST is one that needs to continue to ensure continuous safety improvements.

No actions were identified from this workshop.

Combined Flight Crew Licensing/Operations Workshop

Chairs: **Fergus Woods**, JAA Licensing Director
Mike Harrison, JAA Assistant to Operations Director
Emily White, International and Policy Programs Office, FAA/AFS-50
Jim McDonald, Operations, Seattle Aircraft Evaluation Group, FAA/SEA-AEG

Summary of Presentations:

Introduction: The workshop was opened by the Co-chairs. It was noted that during the workshop, the agenda items would be briefed as follows:

- Items 1, 3, 4, 6 and 7B, by Fergus Woods.
- Item 5 by Emily White.
- Item 2 by Jim McDonald.
- Items 5 and 7A, by Dietrich Otto.

Agenda Item 1: Report out from Harmonisation Management Team on Combined Flight Crew Licensing/Operations Issues

1.A. Action Items from the 19th Annual JAA/FAA Conference

The action items were briefed as reported in the conference handout material.

1.B. Accomplishments in addition to the action items

The accomplishments were briefed as reported in the conference handout material.

1.C. Work Plan for the Coming Year

The work plan for the coming year was briefed as reported in the conference handout material.

Agenda Item 2: MMEL Development: FAA/JAA/TCCA

The information was briefed as reported in the conference handout material.

It was reported that JAA, FAA and TCCA are currently developing a common document which represent the core items. This is likely to be part of the JAA Joint Implementation Procedures. It is anticipated that the work will be finalised in November 2003. The A340-500/600 examples are being used in other test cases.

It was also noted that emerging common technical processes will undoubtedly ease matters and will avoid work duplication in several areas (e.g. pilot qualifications and MMELs).

Agenda Item 3: Pilot Type Rating Determination and Training Program Development for Aircraft Types: FAA/JAA/TCCA.

This item was briefed as reported in the conference handout material.

Agenda Item 4: Special licences/validation for manufacturers test pilots

The FAA informed that no conclusion has been taken yet on their side due to the high workload in the rulemaking area.

The JAA will discuss in the next JAA Licensing Sectorial Team meeting the proposal developed by the Type Rating Steering Group, which contains a revision of the text of JAR-FCL 1.015 and the creation of a specific Appendix.

The JAA Licensing Sub-Sectorial Team (Helicopter) will also be consulted whether the proposal in the aeroplane area could also be applicable for helicopter manufacturers test pilots.

Agenda Item 5: Qualification of STD outside the JAA geographical area

Mr. Otto reported about the FAA/JAA HMT Project Team meeting # 1 which took place from 20-22 May 2003 in Atlanta. During this meeting a proposal was developed for the recognition of the FAA Qualification of Flight Simulators for corporate and regional jets.

Mr. Labbé (DGAC-France) and Mr. Herrero (DGAC-Spain) expressed their concern about the process which had been followed to develop these proposals outside the mainstream BASA SIP process.

The SIP arrangements should be updated, due to the recent amendments to JAR-STD 1A. The forthcoming introduction of 14 CFR Part 60 will also instigate an additional update.

Agenda Item 6: Considerations of any issues from the Thematic Workshops of this 20th Conference

No issues were forthcoming under this item.

Agenda Item 7: Essential Requirements

7A. Operations

Mr. Otto reported as in the conference handout material.

7B. Licensing

Mr. Woods reported as in the conference handout material. He also informed that very soon work will be initiated on the preparation of a consultation document with explanatory note for the Essential Requirements.

Mr. Probst (European Commission) informed:

- Consultation on ER Licensing and Operations will take place during this summer.
- The Commission is scheduled to propose text to the Parliament & Council at the end of 2003.
- The discussion in the Parliament could take 18 – 24 months.
- At the end of 2005 work could start on the development of Implementing Rules for Licensing, Operations and STDs.

Discussion Issues:

Covered under the specific agenda item.

Workshop Actions and Conclusions:

The workshop agreed that satisfactory progress had been made on the items covered under agenda item 2, 3, 4 and 7 and the issues would continue to be reported at HMT meetings.

Concerning item 5, the JAAC will be briefed on the developments and advice will be sought concerning the recommendations of the JAR STD Advisory Board regarding qualification of STD outside the JAA geographic area.

Combined Aircraft Certification/Maintenance Workshop

Chairs: **Koos van der Spek**, JAA Certification Director
 Gert Litterscheidt, JAA Maintenance Director
 Vi Lipski, Manager, Transport Airplane Directorate, FAA/ANM-100
 Dave Cann, Manager, Aircraft Maintenance Division, FAA/AFS-300

Presenters **Wilhelm Schulze-Marmeling**, JAA
 Dave Hempe, Manager, Aircraft Engineering Division, FAA/AIR-100
 Dave Gibbons, JAA
 Mike Kaszycki, Manager, Transport Standards Staff, ANM-110
 Len Arnot-Perrett, JAA

Summary of Presentations:

1. Repair Data Acceptance

Two presentations were given for this topic, one providing the participants with an update on the activities of the Repair Working Group, the other detailing a review by the FAA of the possible methods for acceptance of repair data.

The FAA/JAA Repair Working Group (RWG) was established by the Certification Sectorial Team (CST) as a result of an action identified during the 2002 Annual FAA/JAA International Conference in Phoenix. Its Terms of Reference (TOR), agreed upon in November 2002, was to address reciprocal acceptance of repair classification and data. The Repair Working Group met twice in 2003, plans to meet twice in July this year and submit their final report by end of August 2003. So far, the work is progressing well and no major issues have been identified.

The FAA's presentation addressed the regulatory issues on the transfer of used aircraft to the US and explored options to facilitate this transfer. A revision to the Bilateral Aviation Safety Agreement's Implementation Procedures for Airworthiness (BASA IPA) was considered, however, this was not pursued since individual IPAs are not being modified pending the future IPA with EASA. The current IPAs do, however, allow for special arrangements that may be used to address the issue. In pursuing this option, the FAA is conducting a data approval system evaluation to demonstrate the required equivalence to the FAA approval system. Such an evaluation has already been completed on the CAA UK system in February 2003 with the determination that the UK approvals are equivalent to those made in the FAA system. The next steps will be to formalise this finding by an exchange of letters finalising an FAA and CAA UK arrangement, and by the issuance of an FAA interim policy this summer. A second evaluation will be conducted on the LBA system.

Discussion Issues:

The chair recognised the importance and the complexity of the task given to the Repair Working Group. No major difficulties were encountered and the work is progressing well.

Two questions were raised on legal issues:

- Minor repairs under one system may be considered as major repairs in the other system. How is this dealt with legally? In particular, prior to the implementation of JAR 21 and the DOA process, for minor repairs, data were “accepted data” and not “approved data”. The team determined that evaluating the system under which the repair was accepted/approved and making a determination as to whether the systems were equivalent covered this issue.
- This same legal issue was considered to be applicable for data that has been “accepted” under SFAR 36.

Another question was raised regarding whether the FAA has any plan to conduct a similar activity with other countries (e.g. Asian Pacific). It was agreed that there needs to be an approach for the other countries. Interested parties should initiate discussions with the FAA. From there, the intent would be to work through the bilateral system.

The final issue raised addressed the Instructions for Continued Airworthiness (ICA's) associated with a repair. The ICA's at the repair level are not required per Part 21. The types of issues addressed in ICA's (i.e. damage tolerance) would have to be addressed during the process of approving the repair.

2. Fuel Tank Safety

Two presentations were provided to the participants on this issue.

A joint FAA/JAA presentation gave an update on the various issues currently under review jointly by FAA and JAA.

- Harmonisation of the unsafe condition criteria (completed)
- Fuel tank safety reviews
- Implementation of the unsafe condition criteria
- Continued operational safety and maintenance aspects
- The “Fuel Tank Inerting” activities.

The harmonisation of implementation of the unsafe criteria continues to support a model-by-model balanced, common and consistent solution set. For low flammability tanks, there is a harmonised solution set. The FAA and JAA are continuing to work toward this for high flammability tanks. The fuel tank safety reviews are taking place to support mandatory action decisions by June 2003. With regard to the mandatory action required, based on feedback from the JAA and industry, the FAA has made the decision to mandate any action required to address unsafe conditions by Airworthiness Directive (AD). Therefore, the FAA intends to withdraw the change to the operating requirements. FAA and JAA have harmonised special conditions as certification requirements for fuel tank inerting and are optimistic regarding progress on this option.

A second presentation regarding fuel tank safety implementation was given on behalf of the JAA Maintenance Sectorial Team. The JAA has developed and published an interim policy that, for continued operational safety/maintenance, is harmonised with FAA SFAR 88 and is drafting a temporary guidance leaflet based on the FAA draft advisory circular (AC) developed jointly by FAA and JAA. Corrective actions required to address non-compliant issues will go through the conventional processes. Corrective actions required to address unsafe conditions will be dealt with by AD and will require additional maintenance and modifications. Fuel tank system intrusion, however, should be kept to a minimum, consistent with the necessary actions to maintain certification standards. The AD's will be issued by each JAA Member State with proper co-ordination within JAA to ensure a harmonized compliance time.

Discussion Issues:

A question was raised on the harmonisation of implementation time frames. It was clarified that the aim will not be to publish the ADs on the same day but to have a harmonised compliance date.

Industry expressed the concern that current draft policies (e.g. draft AC and TGL) also have to be commented upon by Industry and harmonised. They also indicated that an inerting solution may introduce unsafe conditions that have to be addressed. Finally, Industry cannot wait too long before a decision is taken on how to deal with the issue. With regard to the first question, the authorities indicated that they will refer the draft TGL to the relevant JAA Sectorial Teams and will review the policy for consistency. Regarding the latter, the chair emphasised the need to look back to the data and work diligently but, at the same time, to take the needed time to review the data and make the appropriate decision.

3. Aging Systems

A Joint JAA/FAA presentation was prepared to update the participants on the Aging Systems activities and provide them with a status report on the Enhanced Airworthiness Program for Airplane Systems (EAPAS). EAPAS is a programme designed to enhance current airplane systems airworthiness programmes at operator facilities, repairs stations, and manufacturing plants based on data-driven initiatives developed under the Aging Transport Non-Structural Systems Plan. Its implementation plan is organised in 6 major categories covering design, certification, and maintenance of transport aeroplanes. All EAPAS Near-Term enhancements (e.g. new policy, training) have been accomplished. The Long Term enhancements (e.g. rulemaking, changes to ICA's) are expected to be completed by the end of 2004. In addition, there are several research programmes underway or being developed that may extend beyond the 2004 timeframe. The FAA is currently in the process of developing an NPRM, based on ATSRAC recommendations, in full cooperation with JAA and TCCA. The preliminary cost/benefit analysis conducted may not support the implementation of all ATSRAC recommendations. The FAA is considering means, other than rulemaking, as appropriate instruments for implementing some of the recommended enhancements. Finally, FAA is in a process of tasking ATSRAC with 3 new activities, one being to develop an enhanced wiring inspection for small transport aeroplanes.

A second presentation was prepared by the JAA Maintenance Sectorial Team, pointing out the need for JAA to continue its participation in the programme and informing the participants that the JAA implementation options are being developed.

Discussion Issues:

Both presentations were not presented due to lack of time.

Workshop Actions and Conclusions:

1. Repair data acceptance: The chair recognised the importance and the complexity of the task given to the Repair Working Group. No major difficulties were encountered and the work is progressing well and is on track to be completed by August 2003.
2. Fuel tank safety: The chair emphasised the considerable effort of harmonisation between FAA and JAA on this issue and was confident that the updates proposed through the presentations have illustrated this co-operation.

The authorities are working toward data driven solutions. The System Safety Assessments are now complete and the data are being evaluated to determine the appropriate balanced, common and consistent solution. There is an understanding of the urgency seen by manufacturers in developing designs and the authorities are committed to work the issue and continue ongoing communication with industry. The chair offered the possibility of an additional workshop with industry, focusing more on continued operational safety/maintenance and training issues, if it is considered to be necessary.

3. Due to lack of time, the issue of Aging systems was not discussed.

Flight Crew Licensing Workshop

Chairs: **Fergus Woods**, JAA Licensing Director
Emily White, International Policy and Programs Office, FAA/AFS-50

Summary of Presentations

Introduction: The workshop was opened by the Co-chairs. It was noted that during the workshop, the agenda items would be briefed as follows:

- Items 1, 3, 4, 5 and 6 by Fergus Woods.
- Item 2 and 5 by Emily White.

Agenda Item 1A: Actions from the last Annual Conference:

The action items were briefed as reported in the conference handout material.

Agenda Item 1B: Accomplishments in addition to the action items:

The action items were briefed as reported in the conference handout material.

Agenda item 1C: Work plan for the coming year:

The action items were briefed as reported in the conference handout material.

Agenda item 2: FAA Rulemaking/Amendment Update

This item was briefed as reported in the conference handout material.

It was asked whether the FAA is considering the inclusion of a photograph of the pilot on the certificate. The FAA replied that a prototype had been developed, but was not implemented due to practical difficulties. But, the idea is again under consideration due to security concerns.

Agenda item 3: Implementation of JAR-FCL, Amendment update of JAR-FCL, Transition to EASA.

Agenda Item 3A. Implementation

Item was briefed as reported in the conference handout material. It was emphasised that 3 JAA Member States have achieved the mutual recognition status since the previous conference and initial LIST and MEST visits to Italy, Portugal and Romania are planned for this year.

Agenda Item 3B. Amendment update of JAR-FCL

Item was briefed as reported in the conference handout material.

JAR-FCL 1 Amdt. 3 will be published 1 July 2003.

Agenda Item 3C. Transition to EASA.

Item was briefed during the Combined Licensing / Operations Workshop.

Agenda item 4: IPL Work Plan

The comparison work by the FAA detailing those areas of the requirements that differed between the FAA and JAA was now complete. The material has been forwarded to the JAA for study and comment, and will form the basis of the discussion on the JAA/FAA model IPL. FAA and JAA will work to finalise a draft model IPL during 2003.

The following answers to questions were provided:

- Regarding comparison of the medical and practical flight test requirements, these items were accepted as settled, since they are proposed to form part of the conversion process.
- The scope of the IPL will cover all levels of licences, but for the aeroplane only initially.
- Regarding the social impact of conversion arrangements, the FAA and JAA insisted that their input could only cover the technical aspects.

Agenda item 5: ICAO Annex 1 review

Item was briefed as reported in the conference handout material.

Regarding the ICAO panel work programme item # 5, it was discussed whether this should become a HWP item. This will be reviewed as the ICAO programme progresses.

Agenda Item 6: Issues from Thematic Workshops of the 20th Conference

No issues were forthcoming under this item.

Discussion Issues:

Covered under the specific agenda items.

Workshop Actions and Conclusions:

1. The work plan for the coming year should proceed as proposed.
2. FAA and JAA will work to finalise a draft model IPL during 2003.
3. Review ICAO FCLTP work on synthetic devices for relevance to FAA/JAA HWP regarding terminology and credits.

Operations Workshop

Chairs: **Mike Harrison** representing **Georges Rebender**, JAA Operations Director
Jim McDonald, Supervisor – Operations, Seattle Aircraft Evaluation Group, FAA/SEA-AEG

Presenters Mike Harrison, JAA
Jim McDonald, FAA

Summary of Presentations

Introduction: The co-chairs opened the workshop.

Agenda item 1: Report out from the Harmonization Management Team, HMT, on operations issues.

1A. Action items from the last Annual Conference:

1. ETOPS
2. AWO, All Weather Operations

The status of both of these issues is completed as reported in the workshop handout.

1B. Accomplishments in addition to the action items:

The accomplishments were briefed as reported in the conference handout material.

1C. Work Plan for the Coming Year:

The work plan for the coming year was briefed as reported in the conference handout material.

Agenda item 2: Simulators.

The information was briefed as reported in the conference handout material. There was a comment that the BASA SIP process should be re-energised to facilitate the mutual recognition process.

Agenda item 3: Performance.

This topic was briefed by Mr. McDonald of the FAA as reported in the conference handout material.

Agenda item 4: ETOPS.

The information was briefed as reported in the conference handout material. In addition, Mr. Mohan Pandey (Boeing) briefed on the very latest activities concerning JAA and FAA in this regard. A working group is currently finalising ETOPS/LROPS Type Design and the operational recommendations are expected to elicit several dissenting comments. The work group was instructed to harmonise the Type Design requirements only with the ARAC recommendations. Based on the JAA response to the ETOPS/LROPS recommendations and expected FAA NPRM, the JAA intends to proceed with the normal NPA process.

Agenda Item 5: EASA Transition.

The information was briefed as reported in the conference handout material.

Agenda item 6: Considerations of any issues from the Thematic Workshops of the 20th Conference.

AEA presented a paper outlining its concerns and its position on the proposed FAA Precision Runway Monitoring programme (PRM) and the training required by operators in order to be qualified to comply with the impending requirements. This document was distributed to those present. FAA agreed to review these concerns.

Presentations

Mike Harrison, on behalf of Georges Rebender, gave a presentation on “Safety Management, Maintaining the Safety Margin – An Integrated Approach”.

The presentation generated much discussion, with attendees providing feedback on the current situation and supporting heightened focus on this concept. Some of the commentators stressed the importance of anonymous reporting and the provision of feedback of information to reporters.

Discussion Issues:

1. One issue presented for discussion was the proposal for enhanced co-operation and liaison in respect of ground de/anti-icing programmes and issues. Existing hazards of fluid re-hydration and expansion causing freezing/impingement of primary flight controls was cited. Another issue was whether there was the need for the development of standards for fluids, as distinct from fluid specifications. The FAA and TCCA were invited to join with the JAA to address and discuss these issues.
2. Wake Vortex issues, especially in respect of new and heavy aeroplanes (Airbus A 380) was presented and discussed. It was thought that the issue should be studied by the JAA, FAA, and others.

3. Mike Harrison briefed on proposed new JAA requirements and guidance material regarding Flight Data Monitoring. The resulting discussion centered around the safeguarding of the data and “no-blame” cultures - both concepts being crucial to the success of this important safety tool.
4. Arising from the presentation of the JAA Working Paper, a concern was expressed regarding the definition of “Corporate Aircraft” in respect of existing definitions, for example, ICAO. It was agreed that this comment would be passed on to the group which is progressing this definition within JAR-OPS 0, 2 and 4. It was also emphasised that the NPA process had not yet commenced and there existed the normal channels for expressing concerns of this nature.

Workshop Actions and Conclusions:

The co-chairs thanked everyone for their participation in the workshop.

The importance of continued harmonisation efforts was emphasised.

Co-operative/collaborative efforts were to be arranged in regard to the first three discussion items:

- Ground De/Anti-icing issues,
- A 380 Wake Vortex,
- Flight Data Monitoring

Maintenance Workshop

Chairs: **Gert Litterscheidt**, JAA Maintenance Director
 Dave Cann, Manager, Aircraft Maintenance Division, FAA/AFS-300

Presenters: **Gert Litterscheidt**, JAA
 Dave Cann, FAA

Summary of Presentations

Report out from the Harmonisation Management Team on Maintenance Issues by Dave Cann and Gert Litterscheidt.

Dave Cann presented an overview of the revised FAR Part 145 implementation.

Gert Litterscheidt presented an overview of the maintenance issues associated with the transition to the EASA system.

Discussion Issues:

- 1) FAA clarified the new FAR-145 requirement regarding the contracting of maintenance functions. It was explained that the FAA would only approve the function which would be contracted. This is for all cases including contracting to approved or unapproved sources.
- 2) JAA highlighted that discussions had commenced with Transport Canada regarding development of a future Community / Transport Canada bilateral agreement.
- 3) The steering group working on evaluating the transition between JAA and EASA continues its work utilising an assessment plan consisting of four modules. A final meeting of the group is to be scheduled prior to the FAA assessment of the EASA system.
- 4) The subject of Transition from JAR-145 to IR-145 was fraught with questions. Industry requested a practical solution to facilitate transition using a reasonable time frame.

The discussions were also focussed around the transition of Foreign JAR Maintenance Organisations subject to Bilateral Agreements.

- 5) The subject of how Airworthiness Directives would be issued was raised. It was clarified that this is a certification activity and would be dealt with via IR-21 and comes under the remit of EASA.
- 6) The transfer of JAR OPS Subpart M into the proposed IR M was queried. It was highlighted that IR M will establish the criteria for maintenance aspects that were previously contained in JAR OPS Subpart M and will supersede any nationally adopted requirements.

Workshop Actions and Conclusions:

Agenda Item 1. Report Out from the Maintenance Workshop 2 June 2003.

1. Action Items arising from the Conference

It was agreed that the work programme for the forthcoming year should proceed as detailed in the conference handout material subject to the following items:

Two action items arising from the 20th FAA/JAA Annual Conference.

1. MIP. Discussions on the MIP are to be continued in the following area:

FAA/JAA will carry out a Regulatory comparison between the proposed FAR 145 of October 2003 and the EASA Part 145 Implementing rule. This is to include the applicable comparative elements of FAR 65 / IR 66 and FAR 147 / IR 147.

2. FAR 145. Rating and Quality Assurance systems

FAA will continue the development of a new NPRM for FAR 145 considering the ratings system and quality assurance ARAC recommendations.

Aircraft Certification Workshop

Chairs: **Koos van der Spek**, JAA Certification Director
 Yves Morier, JAA Regulation Director
 John Hickey, Director, Aircraft Certification Service, FAA/AIR-1
 Claude Probst, European Commission

Presenters: **Dave Hempe**, Manager, Aircraft Engineering Division, AIR-100
 Koos van der Spek, JAA Certification Director
 Mike Kaszycki, Manager, Transport Standards Staff, ANM-110
 Thaddée Sulocki, JAA Harmonization Coordinator
 Claude Probst, European Commission
 Roger Simon, JAA

Mr. Hickey recognised the contributions and leadership of Mr. Koos van der Spek as Certification Director of the JAA, in light of his departure from Central JAA. The FAA provided a plaque signifying FAA's gratitude for Mr. van der Spek's accomplishments.

Summary of Presentation

Changed Product Rule (CPR)

It became evident after the publication of the CPR rule, that detailed comprehensive advisory material was needed to avoid unnecessary bureaucratic requirements. The JAA, FAA, and TCCA and their industries worked very diligently to develop and adopt the advisory material. AC 21.101-1, Change 1 was signed in April 2003 and NPA 21-32 was adopted by the JAAC in November 2002. Each authority also developed procedures for their staffs, i.e. FAA Order, JAA TGM, TCCA policy letter.

Training is another important element to CPR. It was important that industry participated in training development to ensure consistent understanding of CPR by all parties. The training was an integrated effort with FAA and JAA instructors teaching joint classes. Classroom training has occurred in all FAA product directorates, and there have been 3 Interactive Video Training (IVT) sessions that allow broad participation. TCCA is near the end of 7 training sessions. JAA's first phase of training included CST, sub CST, key PCMs. There has been a prototype session followed by four sessions at the LBA, DGAC France, CAA UK, and a special session for engines in Vienna. JAA's second phase of training for the remaining personnel is scheduled for second half of 2003.

An implementation continuous improvement team (CIT) was developed by the FAA and will include JAA and TCCA membership and provide a forum for industry input.

The CIT allows the authorities to monitor the implementation of CPR and provide a forum to identify difficulties and provide a path to update changes in the process through advisory material. A CPR website, based on a TCCA initiative, is being pursued.

Discussion Issues:

Airbus commented that industry training will follow the authorities' training. The CIT is very important as much will be learned and adjusted as the rule is applied.

DGAC Spain commented that industry participation is important to develop a common understanding, but it needs to extend to beyond the primary manufacturers, i.e. STC modifiers.

Summary of Presentation

Update on Rulemaking Prioritisation

The Harmonisation program has been worked for over a decade, and the airworthiness codes are nearly harmonised. While the JAA has been quick to make amendments to incorporate the harmonised requirements, the FAA has encountered problems with getting rules published. However, the FAA has developed a process to allow the use of harmonised requirements during certification programs.

The backlog of FAA rulemaking initiatives is over 130 Part 25 projects with an average of only 6 Part 25 projects completed each year. The realisation has been that a new rulemaking process is needed to effectively focus resources. As a result, the HMT tasked an ad-hoc group in March 2003 to develop the process with a focus on the airworthiness codes.

An overarching goal was to get a small list of about 20 projects from the existing HWP, CAST/JSSI recommendations, as well as untasked projects. The FAA plan also provides an FAA-only process that allows FAA to adopt JAR. These tasks do not involve economic evaluations and resource expenditures are minimal.

The HMT was used as a forum to obtain public/industry input into the priorities. The FAA/JAA/TCCA agreed on a moratorium on a number of lower priority tasks. The powerplant installation HWG and general structures HWG are mainly affected by the moratorium.

The FAA input to the priority list was based on an AVR-developed priority list while JAA input was based on the HWP and JSSI recommendations. The final list contains 26 projects: 19 HWP projects, 4 outside HWP, 3 new initiatives. From this list, 12 projects were identified by industry as priorities.

The next steps include reconfirming the commitment to the list, discontinuing ARAC activities for certain low-priority tasks, and supporting a team to determine an appropriate cycle for updating the list. Also, there is a need to account for "pop-up" tasks.

Harmonisation continues to be an important objective and prioritisation is necessary to efficiently achieve our safety goals. It is important that this activity is maintained with EASA.

Discussion Issues:

General Electric applauded the effort to prioritise rulemaking but was concerned about the effects on alternatives to rulemaking, i.e. rulemaking by issue paper. The FAA Chair responded that he will ensure that he will not permit rulemaking outside the rulemaking process.

HAI expressed concern on the ability to promulgate rules that are important to the rotorcraft and general aviation industry. FAA mentioned that place holders will be included for the other directorates.

Airbus mentioned that the publication of acceptable methods of compliance by the Transport Directorate provided significant value.

A comment made on the need for private use SFAR to be pursued by FAA/JAA. FAA commented that FAA will address the rule unilaterally and JAA said, while not a priority. They will consider it once FAA action is complete.

Airbus/AEMCA expressed their commitment to support the prioritised list and stressed the importance to explain the reasons to those experts whose rulemaking projects will be discontinued. Industry will also support Authorities in that respect.

Boeing asked for an action item for EASA to confirm that requirements do not get introduced without rulemaking procedures. FAA confirmed that no new policies will be introduced on projects and all policy will go through a public process. Boeing reiterated the need for an EASA commitment. FAA agreed to raise this issue with EASA when established.

Boeing asked how changes to the list will be managed. FAA replied that work is needed to define a process to manage changes but no specific answer can be provided at this point. The HMT will be the forum for industry input.

AIA wanted to know where the activity of the ATSRAC (aging systems) fits into the plan. These are included in the prioritisation as one of the 4 projects outside the HWP (EAPAS).

Summary of Presentation

From JARs to EASA Implementing Rules (C.Probst)

Mr. Probst opened the session by indicating the need for Implementing Rules to support the operation of EASA.

The Regulation gives executive powers to the EC to implement the provisions of the rule. The powers given to the EC is subject to a “comitology” procedure involving a committee comprised of Member State representatives.

EASA has responsibilities to provide opinions to the EC for implementing rules (IRs), and for directly adopting certification specifications (CS) and guidance material (airworthiness codes and acceptable means of compliance). These CS have been put under Agency responsibility in order to provide sufficient flexibility for technical specialists to do their work effectively. The CS, while not legally binding requirements, are binding on the Agency, such that if an applicant shows compliance to the CS then the Agency is obliged to issue an approval.

The regulation requires the Management Board to adopt a rulemaking process and it is expected that a decision on the process will be made by 17 June 2003. However, due to the timing of the Regulation, a special process is needed for promulgating the first set of rules by 28 September. It was noted that there are frustrations with the use of this special process.

To take account of that special situation, the philosophy used in developing the initial material is to adopt the most current JARs. New material would be developed only in situations where there are existing gaps in the JARs. Examples of JAR 21 gaps include continued airworthiness, restricted certificates, permits to fly, and third country aircraft used by EU operators. Three core groups were created to address the requirements and certification specifications pertaining to aircraft certification: IR 21; airworthiness codes for aircraft; and airworthiness codes for engines, propellers, and APUs.

IR 21 (R. Simon)

Articles 5, 6 and 14 of the regulation directly support the development of IR 21. The draft IR 21 started from JAR 21, Amendment 4 plus NPAs adopted by JAAC and mature NPAs that have been consulted upon. Section 1 translates into IR 21 requirements, while section 2 translates into IR 21 guidance. JAA Implementation procedures as well as new material explaining responsibilities of EASA, NAAs, and applicants are included in the IR 21 requirements.

The scope of IR 21 includes requirements and procedures for airworthiness and environmental certification and includes two sections and several subparts for each of the two sections. Section A addresses rights and obligations of applicants and approval holders while Section B provides requirements for EASA and NAAs.

Significant changes relative to JAR 21 are summarised as follows:

- Subpart A contains continued airworthiness requirements, including airworthiness directives.
- Subpart B identifies airworthiness codes and special conditions, introduces environmental approval requirements, and introduces restricted type certificate provisions.
- Subpart D incorporates Changed Product Rule (CPR).
- Subpart F contains production authorisation requirements which are expected to be retained at the NAA level.

- Subpart G on Production Organisation Approval (POA) allows foreign applications and also provides documentation of emission compliance through JAA Form 1. Subpart G also incorporates current JAR 21 Appendices A and B.
- Subpart H, which addresses airworthiness certificates, introduces restricted certificates of airworthiness and permits to fly, and also provides a link with IR M and the new concept of an airworthiness review certificate.
- Subpart I introduces the process to obtain noise certificates.
- Subpart J covers Design Organisation Approvals (DOA) that include STC, major repairs, ETSO, minor change/repair approval in addition to TC approvals.
- Subpart K addresses parts and appliances, Subpart M addresses repairs, and subpart O addresses ETSO Authorisation. APUs will be treated similar to products, i.e. engines, but an ETSO Authorisation will be issued instead of a TC. Subpart O also incorporates current JAR 21 Appendix C..
- Subpart Q introduces EPA marking, which is also addressed in Subparts D, E and M, as an obligation for design approval holders other than the TC Holder to specify the EPA marking. All parts produced outside the TC Holder responsibility will have to be marked EPA. Consequently Subpart P has been deleted.
- Subpart L (export C of A) is deleted because subject is out of the scope of the Regulation 1592/2002. It will be included in bilateral agreement or EASA working arrangements with non-EU member states.
- Subpart N (imported products) is also deleted, except for the provisions related to demonstration of capability of design and production organisations.

Ensuring seamless transition (C. Probst)

The initial EC proposal for transition of tasks to the Agency was limited to new products and on-going certifications but it was later felt that the transition should address all products, including existing design approvals. This necessitates that existing certificates be transferred to EASA. Accordingly, a transfer policy has been devised based on the principles of “grandfathering” and continuity in procedures. It also provides for an outsourcing policy allowing EASA to discharge all its responsibilities on 28 September with a limited EASA staff by taking advantage of existing NAA staff.

Transfer of Airworthiness Approvals from Member States to the Agency (R.Simon)

On 28 September 2003, all new applications and all on-going projects will be transferred to EASA. For already certified/validated projects the policy requires definition of an EASA TC basis and ultimately the responsibility will also be transferred to EASA, i.e. continued airworthiness, design changes. All configurations accepted throughout Europe will be accepted. If there are technical problems with any transfer, the policy allows EASA to address transfer during the 42 month transition period provided in the Regulation. Transfer is deferred when the transfer policy criteria is not met (bilateral with one or more member states and certified to codes of the State of Design) or when the use of criteria will result in grounding of aircraft.

New application for modification and repair approvals as well as parts and appliance approvals will be made to EASA. All existing approvals remain valid with continued airworthiness responsibility under EASA responsibility.

Discussion Issues:

Mr. Probst gave appreciation to the industry and authorities for their patience in the process and reminded everyone that IR 21 will be published soon requesting public comment.

A representative from Hamilton Sundstrand asked for clarification of the APU approval process. The APU will go through a process similar to other products, such as engines, but will be issued a ETSO Authorisation and not a TC.

A representative from Boeing indicated that draft IR 21 (reference: IR 21A41 (b)(4) at draft issue 2) appears to state that all configurations previously accepted will continue to be accepted after transfer. It is difficult to understand why transfer would be deferred based simply on the argument of different configurations being operated in Europe. In response to the comment it was stated that an incompatibility may exist if additional mandated features are not included in the configuration. Further discussion ensued on the meaning of the term 'incompatible' and what that would mean relative to STCs, repairs and alterations.

A Cessna representative raised a concern regarding special conditions and/or additional technical requirements imposed by the national authorities and whether these will result in aircraft being grounded while the issues are sorted out. In response to the commenter, Roger Simon indicated that products with technical issues will not be transferred on 28 September 2003 and will remain under national regulations. When an EASA type certificate is defined, additional technical conditions being imposed by individual NAAs today, that are outside the EASA TC basis, will no longer be required.

Several commenters requested additional clarification regarding the transfer policy and how this will effect delivery requirements come 28 September. In response to a question of what will happen if a TC is not transferred on 28 September, the product will continue to be operated as it is today and EASA will have to make a decision on the transfer within the 42 month transition period provided in the Regulation. In those instances where the US TC basis is accepted as the EASA TC basis and there are different configurations due to past additional requirements imposed by NAAs, all those configurations are acceptable alternatives. This means that an EU country will be obliged to accept a configuration that it currently would not accept because an additional requirement (to the US TC basis or JAA TC basis) is not met.

Workshop Actions and Conclusions:

Changed Product Rule (CPR)

Continue support is needed by the authorities and industry for CPR training as well as continued maintenance of TVP and PTVP procedures.

Update on Rulemaking Prioritisation

The support and commitment of industry relative to the prioritisation exercise was welcomed.

It is essential to communicate, in a positive manner, with the specialists whose rulemaking project will be discontinued.

The FAA will discuss as necessary with EASA, when appropriate people are in place, the issue of requirements introduced without proper procedures (rulemaking by policy).

IR 21 / Transfer policy

All parties need to review and comment on IR 21, which contains the transfer policy. This also applies to Certification Specifications which will be consulted upon later.

The JAA will finalise its inventory of work to transfer to EASA such as fuel tank safety, CPR, repair data approval, TVP/Post TVP training, etc.

The FAA is committed to work with the new EASA management on existing certification processes ranging from Type Validation to Changed Product Rule that have developed and matured through the current FAA/JAA relationship.

The FAA and US industry who worked closely with the EC on the development of the Transfer policy expressed concern that the implementation of the policy may lead to discrimination against certain non-European products. The FAA, Industry and the EC must work more closely together to find a mutually acceptable solution.

