

AIR TRAFFIC MANAGEMENT REQUIREMENTS AND PERFORMANCE PANEL (ATMRPP)

WORKING GROUP OF THE WHOLE / 11

Montreal, 26-30 January 2009

SUMMARY OF DISCUSSIONS AND CONCLUSIONS

(Presented by the Rapporteur)

1. HISTORICAL

- 1.1 The ATMRPP Working Group of the whole meeting was held at ICAO headquarters in Montreal, Canada from 26 to 30 January 2009. Mr. Richard Jehlen, member nominated by the United States, served as rapporteur for this meeting. Mr. Saulo José da Silva, Technical Officer of the Air Traffic Management (ATM) Section of the ICAO Air Navigation Bureau is secretary of the ATMRPP.
- 1.2 Eleven members, twelve advisors and one observer attended the duration of the meeting. An attendance list is provided in **Appendix A**.
- 1.3 The meeting wished a happy Australia day to the Australian attendees.
- 1.4 Regrets were received from Mr. Miguel Marin, member nominated by IFALPA, Mr. Regis Peroba, member nominated by Brazil, Mr. Dirk Nitschke, member nominated by Germany, Mr. Ryo Yamauchi, member nominated by Japan and Mr. Terry Deegan, member nominated by Ireland for being unable to attend the meeting.

2. ACTION ITEMS, WORKING ARRANGEMENTS AND APPROVAL OF THE AGENDA

- 2.1 The meeting was conducted in English.
- 2.2 Actions resulting from this meeting include:
 1. Revisions of specific sections of the FF-ICE document will be provided by February 14, 2009.
 2. The FF-ICE document will incorporate all changes agreed-to and be distributed by March 23, 2009.
 3. Comments in response to the new version (0.74) will be received no later than April 15, 2009 to be merged into one sorted document before the meeting. A comment form will be provided for common formatting and discussion, participants were asked to provide the comments within the form for consolidation.

2.3 The agreed agenda for the meeting was approved as follows:

Agenda Item 1	FF-ICE
Agenda Item 2	Flight Object and Trajectories
Agenda Item 3	CDM
Agenda Item 4	ATMRPP Work Plan Update
Agenda Item 5	Coordination Strategy
Agenda Item 6	Other business a) Future meetings b) Any other business

2.4 A list of documentation provided for the meeting is provided in **Appendix B**.

3. DISCUSSIONS

3.1 Agenda Item 1: FF-ICE

3.1.1 Comments received and working papers were described in a table in order of appearance in the FF-ICE document version 0.73. The discussion proceeded in the order set in the table. General comments were discussed first.

3.1.2 A discussion on the general comments focused on the level of detail required in the document and the audience for the document. It was agreed that a wide audience was expected to read this document and that we can communicate details as clearly identified examples of how it might work. In general, the document was not to prescribe implementation.

3.1.3 Working paper 409 was presented by Henk Hof on the drivers for change. The group felt that it was useful to include a discussion of performance in the opening part of the FF-ICE document. There was concern regarding the introduction of the network management function, but discussion was deferred to WP 410. The phrase “performance-based CDM” was not well understood and it was agreed that the text should be changed to indicate: “performance-based, CDM environment”. Regarding the phrase “reactive performance management”, it was discussed that the intent is to use the information to be more pro-active in planning, even if historical information is used. A different term was required to describe the notion. It was also discussed that the FF-ICE supports archiving as part of a broader set of information.

- 3.1.4 Working paper 411 was presented by Dominique Colin de Verdière proposing a modified structure to the document which was revisited by the group subsequent to comment review and discussion. It was agreed that the body of the document would include a short section on transition with reference to a more detailed appendix. Description of the FF-ICE was to be separated into two major sections: an Operational view and a Technical view. An appendix on definitions was to be added and provided by Andrew Beadle. The revised structure subsequent to discussion is presented in Appendix D.
- 3.1.5 Discussion on individual comments followed. Editorial comments were discussed and are not described herein. The following were discussed:
- Text should reflect the potential need to incentivize users to file early, or, at a minimum, not provide penalties for early filers. For example, rules could encourage early filing.
 - It was determined that feedback is required regarding whether a system should be developed with direct user connectivity to each ASP, or whether ASPs should act as a messaging “pass-through”.
- 3.1.6 Working Paper 410 was presented by Andrew Hill. One member mentioned that the paper focuses on the airline community and not the broader airspace user community. The group recognized that there are at least 3 types of trajectories beyond those described in the paper, but that these may be optional. The group identified that all services may not be subscribed to by all users and all services may not be provided by all regions. The group decided that the actors/participants should remain as previously identified by the group at prior WG/WHL meetings. These were identified to highlight the required information. Regarding the network management function, the group determined that this was a function and the concept was not required to elaborate the role of such a function. The group agreed to develop a new section describing the flight-specific view of the scenario. The group also agreed that there would be no initial rejection of the FF-ICE for lack of meeting constraints, as the GUFi must be assigned early in the process to support further interactions. The GUFi structure would be provided only as an example. Scenarios are expected to remain at the airspace user level. The Section on mechanisms would be merged into the document by the editor, where applicable. The group agreed that this document shall not specify requirements. When describing trajectory management, the document should incorporate cross-boundary coordination. The group reiterated the agreement from earlier meetings that the default point of entry will remain as the departure ASP with the option to allow additional POEs by the ASP. The concept of a user-profile for subscription will be added to the FF-ICE document. Regarding global subscription to services, the subscription mechanism should be globally consistent, but only in a fully mature state of SWIM would a user sign on only once. The group expressed concern regarding how to conduct archiving (e.g., piece-wise, or full 4DT archiving by a single user). Specific archiving requirements should be established in a manner consistent with the performance process. The group indicated that the “basic data” category had not been previously defined and that this label should be removed. It was agreed that the table in the Annex would be reconciled with the information items for consistency.
- 3.1.7 The group continued by discussing the comment matrix. The group maintained the 1 year time horizon for early provision of information. Regarding Figure 2.3-2, it was decided that the text should be reviewed to allow the reader to map back to the concept components. The text would be altered to remove references to company routes as practices that would persist into the FF-ICE timeframe. The text-box on CDM will be broadened. Figure 2.4-1 will be revised to attempt to make the information clearer. A discussion on ranked trajectories indicated that these will

remain, but will be distinct from the desired trajectory. The group indicated that consideration of the level of certainty of provided information should be described.

3.1.8 Working paper 414 was presented by Dominique Colin de Verdière. An action was accepted by Andrew Beadle and Dominique Colin de Verdière to draft a terminology section incorporating tolerances. Tolerances were also to be separated in the structure to more clearly identify the different types of tolerances that can be applied.

3.1.9 The document should be amended to ensure that the use of the term “routes” appropriately reflects the future vision. Proposals for alternative versions of Figure 3.1.1-1 were to be considered by the group at the next meeting. The identification of what is the minimum information required to define a trajectory should be included in the document. The footnote on 3DT should be changed to “address the minimum trajectory description”. Fleet priority will be changed to be “operator flight priority”. A more detailed example of movement preferences will be included.

3.1.10 Working Paper 412 was presented by Frank Zetsche. The working group walked through a version of the Appendix (described in a flimsy) identifying the additions and deletions from the version 0.73 FF-ICE document. Frank Zetsche took the action to review the flimsy, together with input from the panel to incorporate comments received. Key items include:

- The discussion of orchestration will be incorporated into the SWIM region discussion
- Both synchronous and asynchronous messaging and diagrams will be incorporated
- The discussion on disparate SWIM Regions and messaging will maintain key points from the original document (in particular, points identifying issues or complexity).
- The initial filing discussion should remain in the operational section
- It is recommended that the GUF1 text from WP 410 be incorporated into the technical section here as an example.
- Regarding IPv6, the discussion should indicate that ICAO is looking at IPv6 as one possible approach.

3.1.11 The issue of regional extensions was discussed and the group agreed that this should remain an open issue.

3.1.12 The discussion on Appendix D of the FF-ICE v0.73 indicated that the XSD should only be provided as a brief example. The text should reflect that the Appendix is only an example and does not represent a standard at this stage. Steve Altus took an action to provide a meaningful example of the application of the schema to a flight planning example.

- 3.1.13 Bernard Gonsalves presented WP 415 on user needs and wants. The presentation described the desire for seamless services across multiple FIRs, the inconsistency between ANSP flight information requirements, and the significant impact of constraints on the efficiency of flights.
- 3.1.14 Steve Altus presented WP 416 on projected future airline operations practices. The paper informed the group that scheduled operators may move towards much more dynamic scheduling practices compared to the present-day. The paper also indicated that the selection of flight trajectories can be impacted by many factors; it may be possible for future operators to provide the probability of trajectory selection.

3.2 Agenda Item 2: Flight Object and Trajectories

- 3.2.1 No papers were submitted specific to this agenda item. Discussion on this subject was held within discussions on the FF-ICE document.

3.3 Agenda Item 3: CDM

- 3.3.1 No papers were submitted specific to this agenda item. Discussion on CDM was held within discussions on the FF-ICE document.

3.4 Agenda Item 4: ATM Work Plan Update

- 3.4.1 Andrew Beadle led a discussion on the revision of the work plan. Concern was expressed regarding the time horizon for receiving comments from other panels. It was mentioned that once the FF-ICE draft concept document is ready for distribution, the secretary would do so within a week and provide the document to the appropriate panels for coordination. It was agreed that at the July meeting, a presentation on the FF-ICE would be delivered to the secretaries of the panels.
- 3.4.2 The July 2009 meeting was revised to commence work on SDM/CDM and SWIM concept of use documents rather than doing so at the January 2010 meeting.
- 3.4.3 The work plan was revised and is included in Appendix C.

3.5 Agenda Item 5: Coordination Strategy

- 3.5.1 Working Paper 413 was presented by the panel secretary and two guests were introduced. Chris Dalton, who is the secretary of the Oplink panel and chairman of the inter-panel coordination group. Neil Halsey is technical officer of the MET/AIM Section. The paper has been prepared following the official request by the World Meteorological Organization (WMO) Secretary General, concerning, inter alia, the reinforcing of collaboration between air traffic management (ATM) and aeronautical meteorology.
- 3.5.2 Neil Halsey presented a briefing on the need for input from the ATMRPP to the WMO regarding current and future capabilities of MET in support of ATM. A proposed approach for coordination was to obtain volunteers from the ATMRPP to receive materials to review via email as part of an informal, fast turn-around review process. It was indicated that while having one view from the panel would be ideal; a quick turnaround was more desirable.

3.5.3 Working Paper 408 was presented by Phil Roberts. The paper remarked that the FF-ICE concept being developed by the ATMRPP impacts on the work of several other Panels and working groups. As such, it is vital that this output is properly co-ordinated. The secretariat provided feedback on the paper and recommended that the meeting be as specific as possible with issues that needed to be addressed.

3.6 Agenda Item 6: Other Business

3.6.1 In accordance with the revised work plan, future meetings were to be held as follows:

- April 20-24, 2009 – Vancouver, Canada to complete the FF-ICE DRAFT document
- July 20-24, 2009 – Montreal, Canada to begin work on CDM and SDM
- November 30- December 4, 2009 – Montreal, the Cape Town location continues to be investigated. A decision is anticipated by the April meeting.

APPENDIX A - ATTENDANCE LIST

Name	Member/ Advisor	Email	Organization
Richard Jehlen	M	Richard.Jehlen@faa.gov	FAA
Diana Liang	A	Diana.Liang@faa.gov	FAA
Stephane Mondoloni	A	smondoloni@mitre.org	FAA
Ken Ehrenberg	M	Ken.Ehrenberg@airservicesaustralia.com	Airservices Australia
Jorge Woods	A	Jorge.woods@casa.gov.au	CASA
Henk Hof	M	Henk.hof@eurocontrol.int	EUROCONTROL
Andrew Hill	A	Andrew.hill@eurocontrol.int	EUROCONTROL
Frank Zetsche	A	Frank.zetsche@dfs.de	DFS
David Behrens	M	BehrensD@iata.org	IATA
Bernard Gonsalves	A	Gonsalvesb@iata.org	IATA
Didier Delibes	M	Didier.delibes@airbus.com	ICCAIA
Alex Pufahl	A	Alex.pufahl@jeppesen.com	ICCAIA
Steve Altus	A	Steve.altus@jeppesen.com	ICCAIA
Hennie Marais	M	henniem@atns.co.za	ATNS
Michael Hohm	M	hohmm@navcanada.ca	CANADA
Phil Roberts	M	Phil.roberts@caa.co.uk	UK CAA
Andrew Beadle	M	agbeadle@gmail.com	IFATCA
Aleks Pavlovic	O	alekspavlovic@videotron.ca	SERBIA
Michel Gaulin	M	Michel.gaulin@videotron.ca	IFATSEA
Yasuhi Inoue	A	Yasu19.inu@gmail.com	NTT DAA I Co
Kimihiko Ito	A	Itou-k2rz@mlit.gov.jp	JCAB
Masamichi Mizutamari	A	Mizutamari-m22h@mlit.go.jp	JCAB
Dominique Collin de Verdiere	M	dcdv@aviation-civile.gouv.fr	DSNA France
Paul-Van-Den-Eynden	A	paul-van-den-eynden@shaw.ca	ACI

APPENDIX B - LIST OF DOCUMENTATION

Number	Prepared/Submitted/Presented	Title	Agenda item
WP/407	Secretary	Proposed Agenda	
WP/408	Phil Roberts	Potential Issues to Discuss with ANC 'Champion' at January 09 ATMRPP WG of the Whole Meeting	5
WP/409	Hartmut Koelman / Henk Hof	Drivers of Change	1
WP/410	Andrew Hill	Flight and Flow Trajectory Management and Associated Mechanisms	1
WP/411	Dominique Colin de Verdière	FF-ICE Outline and Introduction	1
WP/412	Frank Zetsche	FF-ICE: The Technical Environment	1
WP/413	Secretary	Coordination with other groups	5
WP/414	Dominique Colin de Verdière	FF-ICE – Constraints, Tolerances and Trajectory Management Requirements	1
WP/415	Bernard Gonsalves	Flight Plans – A User Perspective	1
WP/416	Steve Altus	Projected Future Airline Operations Practices	1
Flimsy	Stéphane Mondoloni	Blue text version of WP/412 Appendix	1
Comments	Many members/advisors/secretary	Comment form on ATMRPP_FF-ICE version 0.73 document	1

APPENDIX C

WORK PLAN

Date	Task	Comment
26-30 Jan 09	ATMRPP-WG/WHL/11 ICE-FF Concept Doc	Montreal Review version 0.73
14 Feb 09	WG/WHL/11 items due	Work arising from January meeting.
23 Mar 09	FF-ICE version 0.74 available	
15 Apr 09	FF-ICE 0.74 comments due	Send to Stephane for consolidation
20-24 Apr 09	ATMRPP-WG/WHL/12 ICE-FF Concept Doc	Vancouver Complete draft.
	Coordination Strategy	Focus responses using Response Form with questions, etc.
May 09	Ice Concept Document	Distribution of Draft to other ICAO panels and groups
20-24 July 09	ATMRPP-WG/WHL/13 CDM and SDM	Montreal Commence work on "Concept of Use"
	SWIM	Commence work on "Concept of Use"
	FF-ICE Briefing	
30 Nov – 4 Dec 09	ATMRPP-WG/WHL/14 ICE-FF Concept Doc	Montreal (Cape Town) Reconcile feedback from ICAO panels and groups
Jan 2010	Preparation for ATMRPP/1	Meet if required
Feb 2010	ATMRPP/1 ICE-FF Concept Doc	Montreal Presentation of ICE Concept Doc
Jan 2011	Performance Metrics	Resume work on Metrics
	ANSEP	Coordination with ANSEP on Performance
Jan 2012	Global ATM Operational Concept	Commence Review of Concept

Open Items

Coordination with other ICAO panels and bodies (ANC, MET, CAEP, ANSEP)

Appendix D

Proposed FF-ICE structure

1.0 Introduction

- Purpose / objective
- Scope
- Target audience
- Organization / structure of document
- Relationship to other documents / context

2.0 Drivers of Change

- Current limitations / need for change
- Benefits & Costs (addition of text referencing performance process - JW)
- Performance focus
- Link to the overall requirements (action for new text- AH, EHQ)

3.0 The FF-ICE Concept

- Section 2.0 and 3.0 from original document (minus information items description)
- Addition of a section describing the trajectory management - a flight specific trajectory scenario and how the FF-ICE supports it (for example - WP 410 information, some elements of Appendix C to clarify scenario)
- [Review items to ensure split based upon what is relevant to operational persons in here, technical below in 4.0]

4.0 The Technical Environment

- The revision of WP 412 after comments from this meeting (Frank Z.)
- Includes discussion of the GUF1 and technical environment sections from WP 410 (FAA)

5.0 Transition

- High level summary of Appendix, with reference to Appendix

Appendices:

Appendix A – FF-ICE Information Elements

- Proposal of revised table A-3 and re-structure IAW information hierarchy [WPs to propose a new structure]
- Clean up tables for version 0.74

Appendix B – Operational Transition

Appendix C – Operational Scenarios

Appendix D – Understanding the Trajectory

Appendix E – Glossary

- Addition of new terms (AB)

Appendix F – Information Hierarchy

