

Progress Update of ICAO Asia/Pacific FF-ICE Operational Requirements SWG

11th ATM Subgroup Meeting

A. Introduction

B. Status of TBO & FF-ICE Developments

C. FF-ICE Implementation for Asia Pacific

D. Key Takeaways of FF-ICE Ops Reqts. SWG

E. Proposal

A. INTRODUCTION

- FF-ICE will benefit ATM stakeholders with higher predictability because there will be feedback to Airspace Users (AUs) on the flight plan status, including restrictions affecting the flights.
- TBO validation activities has validated FF-ICE/R1 services to be near maturity.
- The following States had come together to form two workstreams to address the five tasks in Decision ATM/SG/10-3.
 - China, Japan, New Zealand, Singapore, Thailand and USA.
- Details of the progress for the OR SWG can be found in WP 20

B. WORKSTREAM ONE – Status of TBO & FF-ICE developments (1/2)

Workstream One (*members: China, Singapore, USA*)

- Study ICAO global TBO and FF-ICE provisions and the outcomes of relevant ICAO technical panels and regional technical groups.
- Present related information to the FF-ICE seminar to be organised by ATM Automation System (ATMAS) Task Force in 2023.

Other key building blocks of TBO

ASBU Threads	Flight Deck Capabilities / Connected Aircraft
<ul style="list-style-type: none">• Technology (ASUR and COMS)• Operations (NOPS)• Information (FICE and SWIM)	<ul style="list-style-type: none">• Flight Management System (FMS)• Electronic Flight Bag (EFB) or Mobile Device

B. WORKSTREAM ONE – Status of TBO & FF-ICE developments(2/2)

FPL 2012	FF-ICE	Near Term Benefits
<ul style="list-style-type: none">• Airspace User (AU) informs flight intent• ANSP uses the limited and static flight plan information for its planning	<p>A live flight plan with detailed trajectory, that is:</p> <ul style="list-style-type: none">• constantly updated as plans change• consistently shared and used by all stakeholders	<ul style="list-style-type: none">• ANSP has more accurate demand information• AU can plan ahead and optimize flight trajectory• Higher predictability on routes and flight trajectory given to flight

Key ICAO timelines ICAO Doc 9965 Manual of FF-ICE (2nd Edition) expected to finalised and made applicable in end 2024 with sunset dates of FPL 2012 expected to be in early 2030s.

C. WORKSTREAM TWO – APAC FF-ICE Implementation (1/4)

Workstream Two (*members: Japan, New Zealand, Singapore, Thailand, USA*)

- Prepare a set of draft harmonised regional operational requirements of FF-ICE/R1, and related operational processes and procedures.
- Recommend an appropriate approach to devise a FF-ICE implementation strategy for the Asia Pacific region.
- Recommend priority ASBU elements and develop draft regional performance objectives for consideration for inclusion in the Asia Pacific Seamless ANS Plan version 4.0.

C. WORKSTREAM TWO – APAC FF-ICE Implementation (2/4)

PRELIMINARY OPS REQUIREMENTS, PROCESSES & PROCEDURES OF FF-ICE/R1

<u>Filing Service</u>	<u>Flight Data Request Service</u>
<ul style="list-style-type: none">• FF-ICE messages allowable under Filing Service• Dissemination of eFPL from eAUs• Relaying of FF-ICE responses from eASPs• Validation of FF-ICE messages• Evaluation of flight plan• Filing status message• Cut-off time for submission of eFPL• Time limit for flight plan updates• Provision of Re-evaluation process• Time limit for Re-evaluation process	<ul style="list-style-type: none">• FF-ICE messages allowable under flight data request service• Data available for request• Users access• Dissemination of flight data request• Relaying of flight data responses from eASPs• Validation of Flight Data Request message

C. WORKSTREAM TWO – APAC FF-ICE Implementation (3/4)

- Mixed Mode Environment Consideration**

Departure ASP is FF-ICE capable (eASP)	Departure ASP is FF-ICE not capable (aASP)
Scenario 1 (Direct Submission)	Scenario 4 (no delegation of responsibility to operator for flight plan distribution)
Scenario 2 (Translation & Delivery by eASP)	Scenario 5 (departure ASP delegates responsibility to operator for flight plan distribution)
Scenario 3 (Forwarding by eASP)	Scenario 6 (eAU unable to disseminate eFPL directly to relevant eASPs)

C. WORKSTREAM TWO – APAC FF-ICE Implementation (4/4)

PROPOSAL ON ASBU ELEMENTS FOR INC. IN THE APAC SEAMLESS ANS PLAN, VER. 4.0

Functional Category	Element	Priority
Information	FICE-B2/2 Filing Service	2
Information	FICE-B2/4 Flight Data Request Service	2
Information	SWIM-B2/1 Information Service Provision*	2
Information	SWIM-B2/2 Information Service Consumption*	2
Information	SWIM-B2/3 SWIM Registry	3
Information	DAIM-B2/1 Dissemination of Aeronautical Information in a SWIM Environment	2
Information	AMET-B2/4 Meteorological Information Service in SWIM	2

* Inclusion of SWIM-B2/1 and SWIM-B2/2 in the Asia/Pacific Seamless ANS Plan, version 4 has already been adopted by APANPIRG/33, Conclusion APANPIRG/33/4.

D. KEY TAKEAWAYS OF FF-ICE OPS REQTS SWG

- Transition of FPL 2012 to FF-ICE is expected to be in phases resulting in mixed mode operations till the sunset of FPL 2012.
- Utilizing translators (i.e. translate FPL2012 to FF-ICE, and vice versa) is possible but that may mean not realising benefits of FF-ICE.
- Some APAC States are already planning for implementation of FF-ICE/R1 services. Hence, there is a need for a regional harmonised approach including transition steps and dates to be harmonised.

E. PROPOSAL (1/2)

- FF-ICE OR SWG recommends:
 - a) A regional harmonised implementation approach to maximise benefits;
 - b) Establishing incremental steps for States' planned transition to FF-ICE/R1; and
 - c) Setting transition dates for the region.
- That means a need to set up a FF-ICE Task Force to:
 - ☐ Develop a FF-ICE implementation strategy for the Asia Pacific region including with timeframes and roadmap
 - ☐ Provide guidance on capabilities required for mixed mode environment where both FF-ICE capable and non-FF-ICE capable airspace users and ATM service providers operate
 - ☐ Continue the development of drafting the Asia Pacific regional FF-ICE operational requirements and related operational processes and procedures

E. PROPOSAL (2/2)

List of tasks as per WP20

- a) Study the various successful development of FF-ICE in other regions and States to draw lessons from them;
- b) Raise the understanding of FF-ICE in the region by sharing use case scenarios and business cases;
- c) **Continue the development of drafting the Asia Pacific regional FF-ICE operational requirements and related operational processes and procedures;**
- d) **Provide guidance on capabilities required for mixed mode environment where both FF-ICE capable and non-FF-ICE capable airspace users and ATM service providers operate;**
- e) **Develop a FF-ICE implementation strategy for the Asia Pacific region including with timeframes and roadmap;**
- f) In coordination and collaboration with APAC SWIM TF, review the development of FIXM revisions and if needed, propose FIXM extension amendments for regional adoption;
- g) As more ASBU elements mature, recommend inclusion into the Asia Pacific Seamless ANS Plan;
- h) Submit inputs and recommendations to the ICAO ATM Requirements and Performance Panel (ATMRPP) when deemed necessary; and
- i) Undertake any other tasks related to FF-ICE implementation that may arise in the future.