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Technical and Professional Manual ATS Policy Reviews

Presented by TOC

SUMMARY

This paper presents the outcome of a comprehensive review of the forty-seven ATS - Provision of Air Traffic Services policies contained in the Technical and Professional Manual (TPM). As a living document, the TPM requires regular updates to ensure clarity, relevance, and alignment with IFATCA's current positions. While some changes involve minor editorial improvements, this paper focuses on policies identified as requiring immediate attention and provides recommendations for revision, reassessment, or removal where appropriate.

1. INTRODUCTION

1.1. The TPM is intended to be a dynamic resource, requiring regular updates to ensure that its policies remain current and accurately express IFATCA's positions in clear and precise terms.

1.2. Updates may range from minor grammatical corrections and wording improvements that strengthen a policy's clarity, to recommendations for revising, reconsidering, or removing policies that are outdated or no longer relevant to the industry.

1.3. A comprehensive review of the forty-seven TPM ATS — Provision of Air Traffic Services (ATS) policies has been completed. Given the number of policies, this paper will focus on those identified as needing immediate attention and will highlight the provisions that merit further review, along with recommendations to revise, reassess, or remove them as appropriate.

2. DISCUSSION

2.1. ATS 3.1 – Replacement Flight Plans

2.1.1. TPM policy ATS 3.1 (TPM 2025a) is an established policy and states,

ICAO should review, as soon as possible, world-wide procedures and systems for amending or replacing flight plans or flight plan information, to ensure that such system and procedures exist, and that amended or replacement flight plans, or portions thereof, are easily identifiable to ATCOs.

As noted in a 2022 IFATCA Working Paper 61 (IFATCA 2022a), This policy should undergo a thorough review to account for advancements in technology and evolving industry practices.

2.1.2. The policy as written is not truly an IFATCA policy but merely a suggestion to ICAO. Until such time as a full review of the policy can occur, it should be reworded in a manner to make it an IFATCA policy. The following adjustment to the policy is suggested,

~~**ICAO should review, as soon as possible,**~~ IFATCA supports the development and implementation of **world-wide procedures and systems for amending or replacing flight plans or flight plan information, to ensure that such system and procedures exist, and that amended or replacement flight plans, or portions thereof, are easily identifiable to ATCOs.**

2.1.3. The adjustment provides wording to evolve the statement to an IFATCA policy while retaining the underlying intent of the original.

2.2. ATS 3.2 – Clearances

2.2.1. ATS 3.2 (TPM 2025b) policy states,

Where downstream clearance capability is provided via Data Link, sufficient safeguards shall be implemented in accordance with the ICAO Doc 9694 Manual of Air Traffic Services Data Link Applications, First Edition 1999.

A route clearance issued to an aircraft should be to destination.

If an ATC unit changes a route then that ATC unit should ensure that the new route rejoins the current flight plan route.

2.2.2. As the policy title suggests, it serves as an overarching policy addressing various aspects of air traffic control clearances. It includes a general provision on Downstream Clearance (DSC), which does not pertain to any specific type of clearance such as route or altitude, alongside more detailed provisions specifically addressing route clearances.

2.2.3. While having a single policy that consolidates multiple clearance-related topics is acceptable, doing so increases the risk of the policy

becoming overly broad and complicated. Furthermore, the TPM already diverges from this consolidated approach by including ATS 3.24 – En Route Restrictions (TPM 2025c), which, although not explicitly stated, also relates to clearances.

2.2.4. With the implementation of Flight and Flow Information for a Collaborative Environment (FF-ICE), it is advisable that a separate, dedicated policy be developed to address route clearances specifically. This would allow ATS 3.2 to focus solely on overarching provisions applicable to all clearances.

2.2.5. One component requiring immediate attention is the policy's reference to a specific edition of ICAO Document 9694. The original policy recommendation cited a draft version of the document that later became ICAO Document 9694 (IFATCA 1998). At that time, referencing the draft version was appropriate, as such documents typically undergo substantial change during development. 2009 IFATCA Working Paper 90 (IFATCA 2009) subsequently reviewed the policy and determined that the reference should be updated from the draft to the published ICAO Document 9694. That review did not identify a requirement to reference a particular edition, only that the citation be brought up to date. Given that ICAO publications are periodically revised, citing a specific edition risks rendering the policy obsolete when future editions are issued. To preserve the policy's ongoing relevance, it is therefore recommended that the edition reference be removed from the policy.

Where Downstream Clearance capability is provided via Data Link, sufficient safeguards must be implemented in accordance with the ICAO Doc 9694 Manual of Air Traffic Services Data Link Applications.~~, First Edition 1999.~~

2.3. ATS 3.3 – Harmonisation of the Airspace Classification

2.3.1. ATS 3.3 (TPM 2025d) policy states,

MAs shall urge ANSPs to co-ordinate and harmonise with all neighbouring states their national airspace classification, in accordance with ICAO Annex 11 Appendix 4, to permit safe and efficient operating conditions to all airspace users and air traffic controllers. Airspace classification should be appropriate for the traffic operating in the airspace, to avoid over and under classification. As traffic situations change, the classification may have to change accordingly. Local operational controllers should be involved in the airspace classification process.

It outlines IFATCA's expectation that Member Associations (MAs) ensure their respective Air Navigation Service Providers (ANSPs) coordinate airspace classifications with neighbouring states. It also specifies that airspace classifications should be periodically reviewed,

ideally with input from local controllers, and adjusted if necessary to reflect current traffic requirements.

2.3.2. While the policy addresses three related aspects, one element, requiring review of classifications, could be misinterpreted as commentary rather than clear direction due to how it is currently phrased.

2.3.3. The principles set out in the original 2016 IFATCA Working Paper 310 (IFATCA 2016) remain valid and continue to underpin the policy, which was slightly updated following the 2022 IFATCA Working Paper 60 (IFATCA 2022a).

2.3.4. The policy remains appropriate in its overall intent, but a minor revision is recommended to clarify that all aspects are directive. Accordingly, the following amendment is proposed,

MAs shall urge ANSPs to coordinate and harmonise with all neighbouring states their national airspace classification, in accordance with ICAO Annex 11 Appendix 4, to permit safe and efficient operating conditions to all airspace users and air traffic controllers.

~~**Airspace classification should be appropriate for the traffic operating in the airspace, to avoid over and under classification. As traffic situations change, the classification may have to change accordingly**~~.The appropriate authority should, as required, review airspace classifications and adjust accordingly to support air traffic operating in the airspace.

Local operational ~~controllers should~~ ATCOs shall **be involved in ~~the~~ any airspace classification process.**

2.4. ATS 3.10 – Units of Measurement in Civil Aviation

2.4.1. ATS 3.10 (TPM 2025e) states,

For the measurement of vertical distance, speed and distance the following units of measurements should be used:

1. **for vertical distance: FEET; (Vertical distance is altitude, elevation and height)**
2. **for vertical speed: FEET PER MINUTE;**
3. **for horizontal speed: KNOTS;**
4. **for long distances*: NAUTICAL MILES.**

*** long distance used in navigation generally in excess of 4000 metres.**

Any change in use of current units of measurement should only be implemented after appropriate training of controllers.

The policy clearly specifies requirements for the measurement of vertical distance, speed, and distance. However, both the policy's preamble and the discussion in 2000 IFATCA Working Paper 100 (IFATCA 2000), including commentary from the International Federation of Air Line Pilots' Associations (IFALPA), highlight the need for a global standard, an aspect not clearly reflected in the current policy wording.

2.4.2. IFATCA advocates the establishment of a global standard for units of measurement for civil aviation. Moreover, it supports the adoption of ICAO's Non-International System of Units (Non-SI) alternative units (ICAO 2010) of feet, feet per minute, knots, and nautical miles. While the policy indicates these units, it does not explicitly state the desire for a global standard nor an intention to designate these units as the global standard.

2.4.3. IFALPA policy (IFALPA 2016) supports the establishment of a rational global standard for units of measurement, referencing the use of feet for vertical distance, feet per minute for vertical speed, knots for horizontal speed, and nautical miles for distance and navigation. These units of measurement are consistent with ICAO's Non-SI alternative units.

2.4.4. Aligning IFATCA´s policy language with IFALPA's stance would present a unified message and enhance its influence with regulatory authorities.

2.4.5. To clearly articulate IFATCA's support for a global standard, specify the preferred units of measurement, and align with IFALPA's policy, the following amendment is proposed,

> IFATCA supports a global standard for the measurement of vertical distance, speed and distance.
>
> IFATCA supports ~~**For the measurement of vertical distance, speed and distance**~~ **the following units of measurements** ~~**should**~~ **be used** as the global standard:
>
> **1. for vertical distance: FEET; (Vertical distance is altitude, elevation and height)**
>
> **2. for vertical speed: FEET PER MINUTE;**
>
> **3. for horizontal speed: KNOTS;**
>
> **4. for long distances*: NAUTICAL MILES.**

*** long distance used in navigation generally in excess of 4000 metres.**

Any change in use of current units of measurement should only be implemented after appropriate training of controllers.

2.5. ATS 3.14 – System Defences During Planned System Degradation

2.5.1. ATS 3.14 (TPM 2025f) policy states,

Risk assessment and appropriate mitigation should be carried out for every planned system degradation.

Arrangements should be made for sufficient staffing during planned system degradation.

While the policy sets out expectations for managing planned system degradations or outages, it does not, however, provide sufficient detail to address all scenarios, nor does it clearly state that Air Traffic Control Officers (ATCOs) must be involved in risk assessments or the development of mitigation measures.

2.5.2. The conclusions drawn in 2004 IFATCA Working Paper 100 (IFATCA 2004), which serve as the foundation for this policy, remain valid and do not necessitate further examination. Nonetheless, the policy should more clearly define its scope and explicitly state that ATCO participation is required.

2.5.3. To ensure the policy fully covers all relevant situations and aligns with standard language used throughout the TPM, the following amendment is proposed,

Risk assessments ~~and appropriate mitigation should~~ must **be carried out for ~~every planned system degradation~~** any planned degradations or outages that may impact availability, reliability or integrity of any system, whole or in part, used in the provision of air traffic services (ATS).

ATCOs must be involved in the risk assessments and mitigations as well as the development of procedures and protocols for any planned degradations or outages. Procedures, protocols, and mitigations must be clearly defined and implemented prior to the degradation, or removal from service, of any system, whole or in part, used in the provision of ATS.

Arrangements should be made for sufficient staffing during planned system degradations or outages.

2.5.4. Having established procedures and protocols for degradations and outages in place, will also enable better support for unplanned and unexpected outages. ATCOs will be better prepared in the event of a failure.

2.6. ATS 3.17 – Conflict Detection Tools

2.6.1. ATS 3.17 (TPM 2025g) policy states,

> **Responsibility and legal implications should be fully addressed before implementation of CDTs.**
>
> **During degraded modes, clearly defined operational procedures shall exist. Nuisance and false alerts shall be kept to an absolute minimum.**

2.6.2. The policy establishes IFATCA expectations relating to conflict detections tools, being utilised as a Controller Tool and not a Safety Net. Three items are included in the policy relating to controller liability, degraded modes, and nuisance alerts.

2.6.3. The existing TPM policy WC 10.2.5 (TPM 2025h) already requires that controller responsibilities be clearly defined and that liability for incidents shall not increase due to the introduction of controller tools or automation. Repeating this provision here creates unnecessary duplication and could lead to inconsistencies if either policy is amended independently.

2.6.4. TPM policy ATS 3.14 (TPM 2025f) already addresses expectations for system degradation. The wording amendment proposed in section 2.5 of this paper clarifies IFATCA's position that procedures and protocols must exist to manage degraded modes. Including this wording again would be redundant and could create conflict should either policy be revised separately.

2.6.5. With respect to nuisance alerts, wording should be amended to a similar statement as that in TPM policy ATS 3.16 (TPM 2025i). This would provide a common language within the TPM.

2.6.6. To remove duplication and maintain consistent language throughout the TPM, the following amendment is proposed,

> ~~**Responsibility and legal implications should be fully addressed before implementation of CDTs.**~~
>
> ~~**During degraded modes, clearly defined operational procedures shall exist.** **Nuisance and false alerts shall be kept to an absolute minimum.**~~ To ensure the integrity of the conflict detection tool, as a Controller Tool, is maintained, all system configurations, adaptations, and customisations must be

set in such a manner to eliminate, avoid or minimise spurious and nuisance alerts from being presented. In addition, these settings must be reviewed on a regular basis, and amended as required.

2.7. ATS 3.29 – Merging and Sequencing Concepts

2.7.1. ATS 3.29 (TPM 2025j) policy states,

> **IFATCA encourages the development of sequencing and merging tools provided that:**
>
> - **They provide controllers with reliable and effective information.**
> - **Local airspace structure, complexity and traffic density are taken into account.**
> - **They are integrated with other systems and adjacent units if required.**

The policy sets out the relevant factors for the use of sequencing and merging tools by controllers, where operationally necessary. However, its current wording should be strengthened by shifting from a tone of encouragement to a clearer position of support.

2.7.2. Adopting an explicit supportive stance, while maintaining the requirements for these tools, will preserve the original intent established in 2012 IFATCA Working Paper 88 (IFATCA 2012) and updated through 2022 IFATCA Working Paper 60 (IFATCA 2022). Explicitly recognising these as Controller Tools within the policy will align it with other related TPM provisions, reinforcing the associated requirements and enhancing the policy's durability.

2.7.3. Considering this, only a minor amendment is necessary. Accordingly, the following amendment is proposed,

> **IFATCA** ~~**encourages the development of**~~ support the development and implementation of **sequencing and merging** Controller T~~t~~**tools provided that:**
>
> - **They provide controllers with reliable and effective information.**
> - **Local airspace structure, complexity and traffic density are taken into account.**
> - **They are integrated with other systems and adjacent units if required.**

3. CONCLUSION

3.1. The fundamental intent of the policies discussed in this paper remains unchanged. The proposed amendments aim to strengthen the individual policies while avoiding unnecessary duplication of broader TPM provisions. Furthermore, the suggested revisions are designed to ensure consistency of language and terminology throughout the TPM.

4. DRAFT RECOMMENDATIONS

4.1. The following amendments are proposed to enhance the clarity, consistency, and effectiveness of the relevant TPM policies.

4.1.1. IFATCA TPM (2025), ATS 3.1 - Replacement Flight Plans

It is proposed to amend the policy to read as an IFATCA policy.

IFATCA TPM ATS 3.1 – Replacement Flight Plans
IFATCA Policy is: ~~**ICAO should review, as soon as possible,**~~ IFATCA supports the development and implementation of **world-wide procedures and systems for amending or replacing flight plans or flight plan information, to ensure that such system and procedures exist, and that amended or replacement flight plans, or portions thereof, are easily identifiable to ATCOs.**

4.1.2. IFATCA TPM (2025), ATS 3.2 - Clearances

It is proposed to amend the policy to remove the edition reference.

IFATCA TPM ATS 3.2 – Clearances
IFATCA Policy is: **Where Downstream Clearance capability is provided via Data Link, sufficient safeguards must be implemented in accordance with the ICAO Doc 9694 Manual of Air Traffic Services Data Link Applications.~~, First Edition 1999~~.**

4.1.3. **IFATCA TPM (2025), ATS 3.3 – Harmonisation of the Airspace Classification**

It is proposed to amend the policy to bring clarity to its intent.

IFATCA TPM ATS 3.3 – Harmonisation of the Airspace Classification
IFATCA Policy is: **MAs shall urge ANSPs to co-ordinate and harmonise with all neighbouring states their national airspace classification, in accordance with ICAO Annex 11 Appendix 4, to permit safe and efficient operating conditions to all airspace users and air traffic controllers. ~~Airspace classification should be appropriate for the traffic operating in the airspace, to avoid over and under classification. As traffic situations change, the classification may have to change accordingly~~**.The appropriate authority should, as required, review airspace classifications and adjust accordingly to support air traffic operating in the airspace**.** **Local operational ~~controllers should~~** ATCOs shall **be involved in ~~the~~ any airspace classification process.**

4.1.4. **IFATCA TPM (2025), ATS 3.10 – Units of Measurement in Civil Aviation**

It is proposed to amend the policy to clearly articulate IFATCA's position and align with IFALPA.

IFATCA TPM ATS 3.10 – Units of Measurement in Civil Aviation
IFATCA Policy is: IFATCA supports a global standard for the measurement of vertical distance, speed and distance. IFATCA supports **~~For the measurement of vertical distance, speed and distance~~ the following units of measurements ~~should~~ be used** as the global standard: **1. for vertical distance: FEET; (Vertical distance is altitude, elevation and height)** **2. for vertical speed: FEET PER MINUTE;** **3. for horizontal speed: KNOTS;** **4. for long distances*: NAUTICAL MILES.** *** long distance used in navigation generally in excess of 4000 metres.** **Any change in use of current units of measurement should only be implemented after appropriate training of controllers.**

4.1.5. **IFATCA TPM (2025), ATS 3.14 – System Defences During Planned System Degradation**

It is proposed to amend the policy to fully cover all relevant situations and align with standard language used throughout the TPM.

IFATCS TPM ATS 3.14 – System Defences During Planned System Degradation
IFATCA Policy is: **Risk assessments ~~and appropriate mitigation should~~** must **be carried out for ~~every planned system degradation~~** any planned degradations or outages that may impact availability, reliability or integrity of any system, whole or in part, used in the provision of air traffic services (ATS). ATCOs must be involved in the risk assessments and mitigations as well as the development of procedures and protocols for any planned degradations or outages. Procedures, protocols, and mitigations must be clearly defined and implemented prior to the degradation, or removal from service, of any system, whole or in part, used in the provision of ATS. **Arrangements should be made for sufficient staffing during planned system degradations** or outages.

4.1.6. **IFATCA TPM (2025), ATS 3.29 – Merging and Sequencing Concepts**

It is proposed to amend the policy to read as an IFATCA policy and align it with other related TPM provisions.

IFATCA TPM ATS 3.29 – Merging and Sequencing Concepts
IFATCA Policy is: **IFATCA ~~encourages the development of~~** support the development and implementation of **sequencing and merging** Controller T~~t~~**ools provided that:** • **They provide controllers with reliable and effective information.** • **Local airspace structure, complexity and traffic density are taken into account.** • **They are integrated with other systems and adjacent units if required.**

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