



ICAO

International Civil Aviation Organization

**The Combined Tenth Meeting of the South Asia/Indian Ocean
ATM Coordination Group (SAIOACG/10) and Twenty—
Seventh Meeting of the South-East Asia ATS Coordination
Group (SEACG/27)**

Video Teleconference, 29 March – 02 April 2021

Agenda Item 3: Review of Current Operations and Problem Areas

SID/STAR PROCEDURES

(Presented by the Secretariat)

SUMMARY

This paper re-presents information presented to ATM/SG/7 in August 2019 relating to the implementation of SID/STAR procedures consequential to amendment 7-A to ICAO Doc 4444 *Procedures for Air Navigation Services (PANS-ATM)— Air Traffic Management* in the Asia Pacific Region. It reminds Asia/Pacific Administrations of the APAC Regional implementation strategy, highlights areas of concerns during implementation planning, and discusses safety concerns resulting from non-harmonised implementation of these procedures. Updated information from ICAO Headquarters is included.

1. INTRODUCTION

1.1 The SID STAR procedures introduced in amendment 7-A to ICAO Doc 4444 - *Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM)*, applicable from November 21016, are intended to clarify ATC intention for flight crews, specifically while flying on Standard Instrument Departures (SIDs) and Standard Instrument Arrivals (STARs). They are intended to remove ambiguity from clearances issued by air traffic controllers to flight crews on their obligations to comply with published restrictions on the procedures.

1.2 SID/STAR procedures were previously discussed by the South Asia – Indian Ocean ATM Coordination Group (SAIOACG) and South-East Asia ATS Coordination Group (SEACG) at their meetings in 2018 and 2019.

2. DISCUSSION

ATM/SG Outcomes on SID/STAR

2.1 The Fifth Meeting of the Air Traffic Management Sub-Group of APANPIRG (ATM/SG/5, Bangkok, Thailand, 31 July to 04 August 2017) agreed to the following Conclusion:

Conclusion ATM/SG/5-17: SID/STAR Phraseology

That, States are urged to take action to implement the SID/STAR-related phraseology included in Amendment 7 to Doc 4444 – PANS-ATM, ensuring that:

- 1. Any phraseologies published in AIP are amended to comply with the new Doc 4444 standards relating to SID and STAR phraseologies; and*

2. *ATC and aircraft operator procedure manuals and training are updated to incorporate the new SID and STAR phraseologies.*

2.2 ATM/SG/6 (Hong Kong, China, 30 July – 03 August 2018) agreed to the following Conclusion:

Conclusion ATM/SG/6-4: Asia/Pacific Regional SID/STAR Phraseology Implementation Strategy

That,

1. *The Asia/Pacific Regional SID/STAR Phraseology Implementation Strategy at **Appendix D to the Report** be adopted, and uploaded to the ICAO Asia/Pacific Regional Office Website, together with an Appendix of information on lessons learned, updated on receipt of new information; and*
2. *All Asia/Pacific Administrations respond to a survey on the implementation status of the SID/STAR phraseology, and report final implementation of the phraseology to the ICAO Asia/Pacific Regional Office.*

2.3 The Asia/Pacific Regional SID/STAR Phraseology Implementation Strategy, available on the [ICAO Asia/Pacific Regional Office eDocuments web-page](#) (ATM Section), is appended at **Attachment A**. While not exhaustive, it includes a checklist of actions and requirements that should be considered by all Asia/Pacific Administrations that have published, or plan to publish, SIDs and/or STARs in the AIP.

2.4 The Strategy includes a Regional implementation date of not later than 07 November 2019.

2.5 The survey on the implementation status of the new SID/STAR phraseology yielded only five responses. ATM/SG has included a follow-up survey in its Task List, for reporting to ATM/SG/9 in 2021. All SAIOACG and SEACG participants are urged to ensure their Administration responds to the survey.

ICAO Activities Supporting Implementation of PANS-ATM Amendment 7A

2.6 The ICAO Secretariat (HQ) established the ICAO SID/STAR Implementation Support Team (ISSIST) to address barriers to a harmonized implementation of the PANS-ATM Amendment 7A provisions.

2.7 Arising from the ISSIST work program, ICAO developed the SID/STAR Toolkit, available on the ICAO Website at https://www.icao.int/airnavigation/sidstar/Pages/SID_STAR-Toolkit.aspx. The toolkit includes information on background and benefits, ICAO provisions and associated changes, training and education, implementation support, FAQs, and a reminder of the obligations of States and aircraft operators in relation to the publication (in Annex 15) and awareness of differences between State practices and the procedures in Doc 4444.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss the status of current or planned implementation of the new SID/STAR phraseologies;
- c) respond to any further surveys on SID/STAR phraseology implementation; and
- d) discuss any relevant matters as appropriate.

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ASIA/PACIFIC REGIONAL SID/STAR PHRASEOLOGY IMPLEMENTATION STRATEGY

Considering that:

1. The harmonized use of phrases for ATC clearances promulgated in ICAO Doc 4444 – Procedures for Air Navigation Services (PANS-ATM) is a safety-critical requirement to ensure common understanding of pilots operating in many different terminal areas, in many different Flight Information Regions (FIRs);
2. The PANS-ATM Amendment 7-A, applicable on 10 November 2016, included new provisions relating to ATC clearance phrases for use in Standard Instrument Departure (SID) and Standard Instrument Arrival (STAR) operations;
3. The application of phrases used by ATC and pilots for SID/STAR operations prior to PANS-ATM Amendment 7-A was inconsistent and frequently confusing to pilots;
4. The Air Traffic Management Sub-Group (ATM/SG) of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) concluded:

Conclusion ATM/SG/5-17: SID/STAR Phraseology

That, States are urged to take action to implement the SID/STAR-related phraseology included in Amendment 7 to Doc 4444 – PANS-ATM, ensuring that:

- 1. any phraseologies published in AIP are amended to comply with the new Doc 4444 standards relating to SID and STAR phraseologies; and*
 - 2. ATC and aircraft operator procedure manuals and training are updated to incorporate the new SID and STAR phraseologies.*
5. The implementation of the new phrases in PANS-ATM Amendment 7-A for use in SID/STAR has not been uniform across the Region, and continues to result in confusion to pilots and potential safety risks;
 6. Explanatory material supporting the implementation of the SID/STAR phraseology is available on the ICAO website at https://www.icao.int/airnavigation/sidstar/Pages/CHANGES-TO-SID_STAR-PHRA-SEOLOGIES.aspx; and
 7. The ICAO SID/STAR Implementation Support Team (ISSIST) was established to address barriers to harmonized implementation of PANS-ATM Amendment 7-A SID/STAR phraseology;

The APAC Regional SID/STAR Phraseology Implementation Strategy is as follows:

1. Asia/Pacific Administrations are urged to implement the use of the SID/STAR-specific phrases specified in PANS-ATM Sections 6.3.2.4 and 6.5.2.4 by **no later than 07 November 2019**;
2. The application of SID/STAR-specific phrases must occur on a common date for all SID/STAR promulgated in the State Aeronautical Information Publication (AIP);

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3. Neighboring States should consider common implementation dates;
4. Implementation of SID/STAR-specific phrases should be undertaken as a joint project of the Air Navigation Service Provider, and the State Aviation Regulator;
5. The following checklist of actions should be followed by each Administrating when planning and implementing the use of the SID-STAR-specific phraseology:
 - a. Form a SID/STAR-specific phraseology implementation team, including appropriately qualified pilots, ATC, instrument flight procedure designers, AIS, ATM automation system and safety management experts, and regulators.
 - b. Ensure all steps in the implementation process are subject to appropriate safety management and regulatory oversight processes, as part of an overall project plan that includes a safety case;
 - c. Determine the implementation date for SID/STAR-specific phraseology, taking into account the checklist actions below;
 - i. The implementation date must conform with the Aeronautical Information Regulation and Control (AIRAC) provisions of Annex 15 – *Aeronautical Information Services*;
 - d. Evaluate current SID/STAR published in AIP, in collaboration with appropriately qualified operational pilot and ATC personnel;
 - i. Consider the impact of SID/STAR-specific phraseology;
 - ii. Make amendments as necessary to remove as far as possible the need for ATC interventions during normal operations; and
 - iii. Ensure any amended SID/STAR are promulgated in accordance with AIRAC;
 - e. Evaluate ATC information processing and/or ATM automation system capability to accommodate SID/STAR-specific phraseology and any amended SID/STAR:
 - i. Plan and prepare any necessary process changes and/or system upgrades.
 - f. Promulgate an Aeronautical Information Circular (AIC) informing all stakeholders of:
 - i. the SID/STAR-specific provisions of PANS-ATM Amendment 7-A;
 - ii. the planned implementation date; and
 - iii. the availability of advisory, guidance or other reference material;
 - g. Develop and deliver SID/STAR-specific phraseology training, for all Air Traffic Control (ATC) staff providing ATC clearances to flights for operations on SID/STAR;
 - i. Include both theoretical instruction and practical training in ATC training simulator, supported by both theory and practical examinations to ensure competency.

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- h. Include assessment of the correct use of SID/STAR-specific phraseology in ATC performance assessment and other relevant licensing processes;
- i. Prepare SID/STAR-specific phraseology information and training packages for pilots;
- j. Coordinate and conduct safety oversight of the development and delivery of SID/STAR-specific phraseology procedures and training for pilots;
- k. Promulgate SID/STAR-specific phraseology in AIP Amendment or AIP Supplement, effective on the applicable AIRAC date and published in accordance with the advance-notification requirements of Annex 15.
- l. Monitor effective implementation.

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