



ICAO

The Third Meeting of the Asia/Pacific Aerodrome Design and Operations Task Force (AP-ADO/TF/3)

Video Teleconference, 9 to 11 February 2022

Agenda Item 2: Planning, Design, Construction and Operation of Aerodromes

ALPHA NUMERIC CALL SIGN PROJECT

(Presented by ACI, CANSO, IATA and ICAO)

SUMMARY

This paper presents information on the Alpha Numeric Call Sign Project, a safety initiative of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) intended to mitigate against call sign radio telephony confusion in Air Traffic Services (ATS) caused by similar call signs. The support of ADO/TF participants is sought for a joint ACI/CANSO webinar on the subject, and for the ongoing advancement of the project in the Asia/Pacific Region.

1. INTRODUCTION

1.1 The Asia/Pacific (APAC) Alpha Numeric Call-Sign (ANCS) project was initiated to help mitigate known safety issues associated with call sign confusion/conflict, which had been increasing with the significant growth of air traffic in the region.

1.2 IATA presented information to the Fourth Meeting of the Air Traffic Management Sub-Group of APANPIRG (ATM/SG/4, 04 – 08 July 2016) on the implementation of ANCS projects in the ICAO Europe (EUR) and Middle East (MID) Regions, aimed to reduce the incidence of call sign confusion. The APAC ANCS project was agreed at ATMSG/4 and endorsed at APANPIRG/27 (05 to 08 September 2016) through *APANPIRG Conclusion 27/15*. Phase 1 of the project involved the gathering of information on ATM system capability to receive and process ANCS. Phase 2 commencement (testing) was subsequently agreed at ATMSG/5 in 2017, supported by *Conclusions ATM/5-5 and 5-6* and ICAO State Letter AP123/17 - ATM (**Attachment A**).

1.3 Phase 2 participating States were Australia, India, Malaysia, Maldives, Pakistan, Singapore and Sri Lanka. The *Phase 2 Asia Pacific Alpha Numeric Call Sign Project – Limited Overflight Acceptance Testing* project plan is available on the ICAO Asia/Pacific Regional Office eDocuments web-page (ATM Section) at <https://www.icao.int/APAC/Pages/eDocs.aspx>.

1.4 IATA and the project lead airline (Etihad Airlines, and later Qatar Airways) worked with various States in the region to develop the ability to accept and process ANCS as enabled in ICAO Doc 4444 – Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM). The main challenges identified in the process were the ability of airport and ATM processes and IT systems to accept and exchange alpha numeric formats and commercial flight numbers.1.5

1.5 This paper provides some information on how airport operators can participate in this flight safety initiative, with support from Air Navigation Service Providers (ANSPs). The participation of APAC airports in the project, and in an associated seminar, is requested.

2. DISCUSSION

Call Sign Confusion

2.1 ATM/SG/4 was informed that call sign similarity could lead to call sign confusion in Air Traffic Control (ATC) communications, and was a potential contributory factor in safety-related events including hear-back/read-back errors, level busts and/or runway incursions, in addition to general confusion and increased workload for pilots and ATC. For example, during the summer of 2014, the EUROCONTROL Voluntary ATM Reporting (EVAIR) programme received over 3,500 reports of call sign similarity/confusion from ANSPs. As recently as the Twenty Sixth Meeting of the ICAO APAC Regional Airspace Safety Monitoring Advisory Group (RASMA/26, September 2021) call sign confusion was cited as a contributing factor in Large Height Deviation (LHD) events recorded for aircraft changes of flight level without ATC clearance.

2.2 ATM/SG/4 was also informed that India had established a task force to actively investigate the issue of similar call signs. IFATCA also endorsed the proposal for an APAC ANCS project. It was noted that Japan had already also introduced ATC procedures for tactical changes to call signs where similar call signs were in use.

2.3 By 2016 the ICAO Europe (EUR) and Middle East (MID) Regions had implemented projects to reduce the incidence of call sign conflicts, using the Call Sign Similarity Tool (CSST) developed by EUROCONTROL.

ANSP – Airport Interface

2.4 In ATM operations including Air Traffic Control (ATC), Air Traffic Flow Management (ATFM) and Airport Collaborative Decision-Making (A-CDM) the ICAO PANS-ATM-compliant ANCS is used in the filed flight plan and all communications between ATM and the flight.

2.5 It is not necessary for all flights to use ANCS. The ANSP uses identification software to detect call signs that are potentially conflicting, and generates ANCS to replace them. Where an ANCS has not been assigned, the conventional ICAO Call Sign is used. **Table 1** provides a few examples taken from live traffic using ANCS in Europe, the Middle East and South Asia on 02 February 2022.

Operator	ICAO Call Sign (conventional)	ICAO Alpha Numeric Call Sign	IATA Flight Number
Emirates	UAE607	-	EK607
Emirates	UAE408	UAE58E	EK408
Qatar Airways	QTR672	QTR71C	QR672
Qatar Airways	QTR663	QTR43F	QR663
Ryanair	RYR9647	RYR9QV	FR9647
Ryanair	RYR3186	-	FR3186

Table 1: Alpha Numeric Call Sign Examples 02 February 2022 (2350 UTC).

2.6 Airport systems and processes use flight numbers in a wide range of interconnected systems, including but not limited to arrival and departure information boards and public websites. One example may be parking stand guide-in systems, as experienced at Dubai. There is a need for the translation of ANCS into flight numbers in these systems, and vice versa, such as airline flight readiness information inputs to A-CDM, Airport Operations Control Centre (AOCC) operations, etc.

2.7 A suggested course of action is to target the interface point at which the airport systems exchange flight information with the ANSP, to permit the translation and exchange of the ANCS and flight numbers. The interface point could be an automated application, and/or a manual process such as seasonal schedule submission.

Airport Operator Participation in the Alpha Numeric Call Sign Project

2.8 The ANCS project is an important safety initiative, which mitigates the significant safety impacts of call sign confusion, such as pilots incorrectly receiving and complying with clearances directed to a different flight with a similar call sign, ATC misidentifying flights with similar call signs in radiotelephony communications and ATM automation system interactions, and consequent air safety incidents such as loss of separation.

2.9 The participation of airport operators in the project is critical to its success. The meeting is therefore invited to nominate APAC Region airports that could participate in the project.

2.10 Airport operators should also anticipate the possibility of future State regulatory developments requiring the use of ANCS to mitigate call sign confusion-related air safety incidents

APAC Alpha Numeric Call Sign Seminar

2.11 ACI and CANSO will jointly conduct an ANCS Seminar for the APAC Region, tentatively scheduled for 01 June 2022. Airport operators are strongly encouraged to participate in the seminar, and are invited to express their interest in providing presentations to the seminar on the following topics:

- Experience in ANCS implementation (systems, processes, challenges, solutions, stakeholder engagement, roles and responsibilities of parties, how to make a good case);
- Barriers to implementation of ANCS in airport operations;
- ANCS awareness training for aerodrome operations personnel;
- Development of related Safety Enhancement Initiatives (SEIs) for discussion by the relevant technical bodies of the Regional Aviation Safety Group (RASG), with a view to their inclusion in the Regional Aviation Safety Plan.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the APAC ANCS project and the flight safety issues it addresses;
- b) identify and discuss ANSP/airport interfaces that require consideration in ANCS implementation;
- c) nominate airports and their supporting ANSPs and airlines for participation in the APAC ANCS project;
- d) participate in, and nominate airport presenters for, the APAC ANCS Seminar; and
- e) discuss any relevant matters as appropriate.

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Ref. T 3/10.1– AP123/17 (ATM)

05 October 2017

Subject: Alphanumeric Aircraft Identification

Action required: To note and take action in accordance with the Conclusions of the Air Traffic Management Sub-Group of APANPIRG, as appropriate.

Sir/Madam,

I wish to draw your attention to the outcomes of the 5th Meeting of the Air Traffic Management Sub-Group (ATM/SG/5)¹ of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG), held in Bangkok, Thailand from 31 July to 4 August 2017, in respect of Asia/Pacific Regional readiness for the use of alphanumeric aircraft identification (call sign) in item 7 of the ICAO flight plan (FPL).

ATM/SG/5 considered the outcomes of a survey of Asia/Pacific States' readiness to accept and process alphanumeric aircraft identification, conducted in response to **Conclusion APANPIRG/27/15 – Use of Alphanumeric Call Signs for Scheduled Airline Operations**. Noting the issues highlighted by the survey relating to pilot briefing/flight planning systems, regulations and procedures in State Aeronautical Information Publications (AIPs), operational procedures to mitigate radiotelephony call sign similarity/confusion and the correlation of alphanumeric aircraft identification with the associated flight number used for overflight/arrival/departure approvals, ATM/SG/5 agreed to the following Conclusion:

Conclusion ATMSG/5-5: State Readiness for Alphanumeric Aircraft Identification

That, States are urged to ensure that ATM and related system capability, regulations, approval processes, and published procedures are implemented to enable the use of alpha numeric aircraft identification in flight plans, in any combination of alpha and/or numeric characters, by not later than 31 December 2019.

ATM/SG/5 considered a proposal by IATA to commence Phase Two of the Asia/Pacific Alphanumeric Call Sign Project, and agreed to the following Conclusion:

¹ Commencing in 2017, Sub-Groups of APANPIRG are empowered to adopt Conclusions of a technical nature where there are no political, economic or environmental considerations.

Conclusion ATM/SG/5-6: Asia Pacific Alphanumeric Call-Sign Project

That,

- 1. Phase Two of the Alphanumeric Call Sign project be commenced, using the project plan at ATM/SG/5 WP/17 Attachment A and with the participation of Australia, India, Malaysia, Maldives, Pakistan, Singapore and Sri Lanka; and*
- 2. the results of Phase Two of the project be reported to ATM/SG/7.*

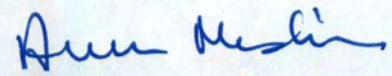
States participating in the project may expect to be contacted directly by the project lead airline, Etihad Airways, to commence activities in accordance with the project plan. The project plan is available on the ICAO Asia/Pacific Regional Office eDocuments web-page at:

<https://www.icao.int/APAC/Pages/edocs.aspx>

Accordingly, States are requested to take note of Conclusions ATM/SG/5-5 and ATM/SG/5-6 and to take action as appropriate. Guidance information to assist States in the interpretation and implementation of the ATM/SG Conclusions is provided in **Attachment A and B**.

States participating in the project (Australia, India, Malaysia, Maldives, Pakistan, Singapore and Sri Lanka) are further requested to provide Alphanumeric Call Sign Project point-of-contact information to the ICAO Asia/Pacific Regional Office by not later than **31 October 2017**.

Accept, Sir/Madam, the assurances of my highest consideration.



Arun Mishra
Regional Director

Enclosures:

- Attachment A** - Implementation Guidance Material - ***Conclusion ATM/SG/5-5***
- Attachment B** - Implementation Guidance Material - ***Conclusion ATM/SG/5-6***

ATM/SG Conclusion Implementation Guidance Material

Conclusion Details

ATM/SG/5 agreed to the following Conclusion:

Conclusion ATMSG/5-5: State Readiness for Alphanumeric Aircraft Identification	
What: That, States are urged to ensure that ATM and related system capability, regulations, approval processes, and published procedures are implemented to enable the use of alpha numeric aircraft identification in flight plans, in any combination of alpha and/or numeric characters, by not later than 31 December 2019.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To enable Asia/Pacific Regional capability to use alpha numeric call signs to reduce the risk of call sign confusion.	Follow-up: <input type="checkbox"/> Required from States
When: 4-Aug-17	Status: Draft to be adopted by Subgroup
Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: CANSO	

Why is the Conclusion necessary (including benefits if known)?

ICAO Doc 4444 – *Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM)* clarifies that the terms *aircraft identification* and *call sign* are complementary. However, given the fact that call sign confusion is a known safety risk and also a workload issue for Air Traffic Control (ATC), it is important to minimize these consequences by introducing alphanumeric call sign capability regionally, as the Middle East (MID) and other regions have done.

Who is affected by the Conclusion?

Asia/Pacific State regulators responsible for oversight of ATC services and flight operations have the main responsibility to respond to this Conclusion. Senior managers of airports, ATC service providers and airlines and technical staff responsible for systems connected with flight planning are also affected.

What needs to be done?

Regulators must examine ATM and related system capability, regulations, approval processes, and ensure that States publish procedures to enable the use of alphanumeric aircraft identification in flight plans, in any combination of alpha and/or numeric characters, by not later than 31 December 2019 in order to conform with regional policy.

This change will require a degree of State education, to reach airport, ATC and airline managers at all levels, as the use of alphanumeric call signs will affect many systems (such as flight planning, on-board and airport public information and airport gate systems).

It is also important to put processes in place to match alphanumeric call signs (aircraft identification) in flight plans with the flight number call sign used for overflight or entry permissions

Who do you contact if you have more questions, or if you would like to offer assistance to other States on this matter?

Contact (in order of precedence):

1. Mr. Shane Sumner, Regional Officer ATM/AIM (ssumner@icao.int); or
2. Mr. Len Wicks, Regional Officer ATM (LWicks@icao.int); or
3. ICAO Asia/Pacific Regional Office, attention ATM Section (apac@icao.int).

Version: 1.0, dated 05 October 2017.

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ATM/SG Conclusion Implementation Guidance Material

Conclusion Details

ATM/SG/5 agreed to the following Conclusion:

Conclusion ATMSG/5-6: Asia Pacific Alphanumeric Call-Sign Project			
What:	That, 1) Phase Two of the Alphanumeric Call Sign project be commenced, using the project plan at ATM/SG/5 WP/17 Attachment A and with the participation of Australia, India, Malaysia, Maldives, Pakistan, Singapore and Sri Lanka; and 2) the results of Phase Two of the project be reported to ATM/SG/7.	Expected impact:	<input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why:	To continue the agreed alphanumeric call sign project for Asia/Pacific	Follow-up:	<input checked="" type="checkbox"/> Required from States
When:	4-Aug-17	Status:	Draft to be adopted by Subgroup
Who:	<input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: IATA		

Why is the Conclusion necessary (including benefits if known)?

Alphanumeric call signs are a recognized mitigation measure for instances of call sign confusion/conflict. With the growth in Asia Pacific traffic both current and forecast, the possibility of call-sign conflicts is likely to increase, which in turn will impact safety and increase both pilot and controller workload.

In 2016, the Asia/Pacific Alphanumeric Call Sign Project initiated a regional survey to ascertain the current capability to accept and process alphanumeric call signs in the region (Phase One of the project).

Etihad Airways has agreed to be the airline lead for Phase Two – building on their successful involvement in a similar project for the Middle East Region, and will commence testing with its summer schedules in the Asia/Pacific Region. Phase Two commences with the following States participating in the project: Australia, India, Malaysia, Maldives, Pakistan, Singapore and Sri Lanka.

Who is affected by the Conclusion?

In the first instance, States participating in the project (Australia, India, Malaysia, Maldives, Pakistan, Singapore and Sri Lanka), and all other Asia/Pacific Administrations as the project is rolled out.

What needs to be done?

States participating in the project may be contacted directly by the project lead airline, Etihad Airways, to commence activities in accordance with the project plan. States participating in the project are further requested to provide their Alphanumeric Call Sign Project point-of-contact information to the ICAO Asia/Pacific Regional Office by 31 October 2017.

All other States and Administrations in Asia/Pacific Region are requested to take note of relevant Conclusions and take appropriate action to support the alphanumeric call sign project.

Who do you contact if you have more questions, or if you would like to offer assistance to other States on this matter?

Contact (in order of precedence):

1. Mr. Shane Sumner, Regional Officer ATM/AIM (ssumner@icao.int); or
2. Mr. Len Wicks, Regional Officer ATM (LWicks@icao.int); or
3. ICAO Asia/Pacific Regional Office, attention ATM Section (apac@icao.int).

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