



ICAO

International Civil Aviation Organization

Eleventh Meeting of the FANS Interoperability Team – Asia
(FIT-Asia/11)

Video Teleconference, 23 – 26 August 2021

Agenda Item 4: Review of ADS-C/CPDLC Operations and Performance

ASIA/PACIFIC CRA ARRANGEMENTS, PROBLEM REPORTING AND PERFORMANCE ANALYSIS REPORTING

(Presented by the Secretariat)

SUMMARY

This paper presents an update on the status of Asia/Pacific engagement in data link problem reporting through the FANS-CRA website, and on the status of performance analysis reporting to a recognized FIT.

1. INTRODUCTION

1.1 The FIT-Asia Terms of Reference (TOR) require that it supports FIT-Asia participant States' compliance with ICAO Annex 11 – *Air Traffic Services* requirements and Global Operational Data-Link Document (GOLD) guidance for data-link performance.

1.2 The transition to Performance-Based Communications and Surveillance (PBCS) also require FIT-Asia to support and monitor participant States' compliance with new standards in Annex 6 – *Operation of Aircraft*, Annex 10 – *Aeronautical Telecommunications*, Annex 11 – *Air Traffic Services*, and in ICAO Doc 4444 – *Procedures for Air Navigation Services (PANS-ATM)*, as well as the guidance provided in Doc 9869 – *PBCS Manual*.

2. DISCUSSION

Asia/Pacific CRA Website Registration and Data Link Problem Reporting

2.1 Monitoring, reporting and analysis of data-link performance and problems is essential for the achievement and maintenance of system performance required for the application of performance based separation. The introduction of ICAO standards and recommended Practices (SARPS) for Performance-Based Communications and Surveillance (PBCS), applicable from November 2016 but with regional implementation from March 29 2018, requires that States fully engage in programs of data link problem reporting, and performance monitoring and analysis.

2.2 **APANPIRG Conclusion 24/24: ADS-C and CPDLC Problem Reporting and Analysis** requested States to register on the FIT-Asia website (formerly <http://www.ispacg-cra.com>, now <http://fans-cra.com>) by 31 December 2013, report problems relating to ADS-C and CPDLC to the Central Reporting Agency (CRA) utilizing the FIT-Asia website, and ensure the CRA analysis was reported to FIT-Asia.

2.3 To support APANPIRG tracking of CRA engagement and data link performance monitoring and analysis activities for all Asia/Pacific Administrations, IPACG and ISPACG were requested to provide information on the FIT-IPACG and FIT-ISPACG Administrations that were registered on the CRA, had submitted problem reports to the CRA, and had provided data link monitoring analyses to the FIT.

2.4 **Table 1** summarizes the Asia/Pacific administrations that have either implemented ADS-C/CPDLC, or are known to be expected to do so under the Asia/Pacific Seamless ATM Plan, and their FIT-Asia CRA registration status.

Administration	Data-Link (ADS-C/CPDLC) Service Status	Seamless ANS Expectation (Nov 2015)	CRA Registration
Australia	Implemented	YES	YES
China	Implemented	YES	YES
Fiji	Implemented	YES	N/K
France (Polynésie Française)	Implemented	YES	YES
India	Implemented	YES	YES
Indonesia	Implemented	YES	YES
Japan	Implemented	YES	YES
Malaysia	Implemented	YES	YES
Myanmar	Implemented	YES	YES
Maldives	Implemented	YES	YES
Papua New Guinea	<i>Implemented?</i>	YES	YES
Philippines	Implemented	YES	YES + SEASMA*
New Zealand	Implemented	YES	YES
Singapore	Implemented	YES	YES + SEASMA*
Sri Lanka	Implemented	YES	YES
USA	Implemented	YES	YES
Viet Nam	Implemented	YES	YES + SEASMA*
* <i>The South East Asia Safety Monitoring Agency (SEASMA) provides CRA service for Philippines, Singapore and Viet Nam.</i>			

Table 1: FIT-Asia ADS-C/CPDLC Implementation and CRA Registration Status.

2.5 **Table 2** lists the number of problem reports and performance analysis reports submitted by Asia/Pacific Administrations, updated to include reports submitted during the period since FIT-Asia/8, i.e. July 2018 – June 2018, and including those reported by FIT-IPACG and FIT-ISPACG.

State	# PR 2018	# PR 2019	# PR 2020 (FIT-Asia/10)	# PR 2021 (to 21 Aug)	Performance Analysis Reports to FIT
Australia	9	6	2	5	YES
China	2	-	1	0	YES ¹
Fiji	-	-	-	1	YES
France (Polynésie Française)	1	-	-	0	YES
India	1	24	-	13	YES ²
Indonesia	18	19	-	1	YES ³
Japan	N/K	5	-	- ⁴	YES
Malaysia	1	1	2	2	YES ⁵
Myanmar	-	1	-	0	YES
Maldives	-	-	-	0	NO
Papua New Guinea	-	-	-	3	NO
Philippines ⁶	9	9	-	0	YES
New Zealand	6	8	9	12	YES
Singapore	10	16	13	10	YES
Sri Lanka	6	3	2	1	YES
USA	14	7	2	17	YES
Viet Nam	1	3	1	2	YES

Table 2: Asia/Pacific CRA Registration and Activity (up to FIT-Asia meeting each year) and Performance Analysis Reporting status.

2.6 While most States providing data link services provided performance data to FIT, few provided any information on their analysis of the data, or on any action taken to investigate and rectify data link performance and non-compliance issues, or to evaluate the need for withdrawal of PBCS-dependent separations where performance fails to meet RCP and/or RSP specifications. The meeting is reminded of the applicable Annex 11 standard, and **Conclusion RASMAG/23-2: PBCS Action List for ANSPs** (drafted by FIT-Asia/8 in 2018):

Annex 11 3.3.5.2: Where RCP/RSP specifications are applied, programmes shall be instituted for monitoring the performance of the infrastructure and the participating aircraft against the appropriate RCP and/or RSP specifications, to ensure that operations in the applicable airspace continue to meet safety objectives. The scope of monitoring programmes shall be adequate to evaluate communication and/or surveillance performance, as applicable.

Conclusion RASMAG/23-2: PBCS Action List for ANSPs

That, the PBCS Action List for Air Navigation Service Providers (ANSPs) provided at Appendix C to the Report be uploaded to the the ICAO Asia/Pacific website to provide guidance in the steps for analysis and reporting of PBCS performance problems.

¹ Lanzhou and Urumqi FIRs

² Chennai FIR.

³ Ujung Pandang FIR.

⁴ Problem Reports are submitted by Japan to JASMA

⁵ Kuala Lumpur FIR.

2.7 ICAO Doc 9869 *PBCS Manual* Chapter 4 and Appendix D provides detailed guidance on compliance with RCP/RSP specifications, and continued operational compliance through PBCS monitoring programmes and corrective action.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper
- b) note and discuss the need for further development of State data link performance monitoring programmes to ensure datalink performance issues are appropriately analyzed and corrective action taken; and
- c) discuss any relevant matters as appropriate.

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