



*International Civil Aviation Organization*

# ICAO

## Twenty-Ninth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/29)

Bangkok, Thailand, 19 – 22 August 2024

### Agenda Item 2: Review Outcomes of Related Meetings

#### FIT-ASIA MEETING OUTCOMES

(Presented by the Secretariat)

##### SUMMARY

This paper presents the outcomes of the Fourteenth Meeting of the Future Air Navigation Services (FANS) Interoperability Team-Asia (FIT-Asia/14) for review by RASMAG/29.

## 1. INTRODUCTION

1.1 The Fourteenth Meeting of the FANS Interoperability Team-Asia (FIT-Asia/14) was held in Bangkok, Thailand from 16 to 19 July 2024.

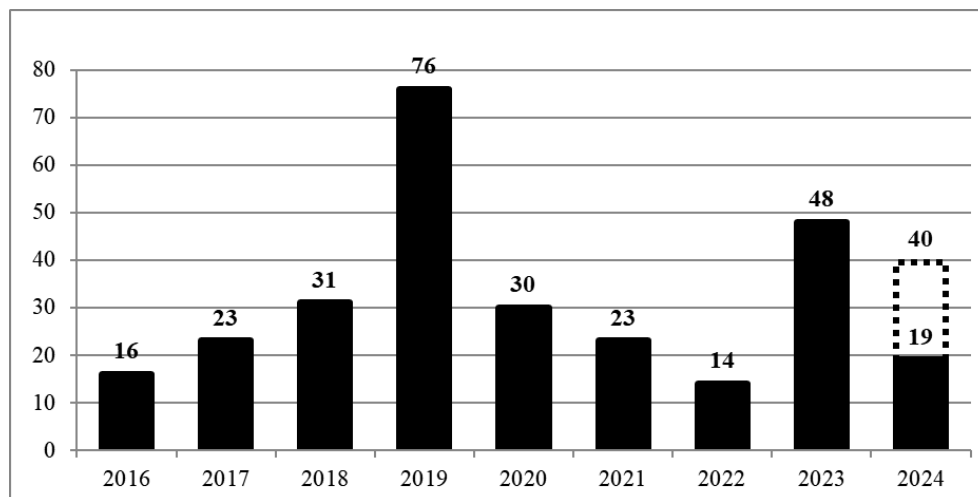
1.2 Mr. Hong Yang, Engineer, China Regional Monitoring Agency, chaired the meeting.

1.3 The full report of the meeting is available on the FIT-Asia/14 meeting web-page at: [icao.int/APAC/Meetings/Pages/2024-FIT-Asia-14.aspx](https://www.icao.int/APAC/Meetings/Pages/2024-FIT-Asia-14.aspx).

## 2. DISCUSSION

### *FIT-Asia Problem Reports*

2.1 **Figure 1** illustrated the number of PRs submitted by the FIT-Asia States per calendar year since 2016.



**Figure 1:** FIT-Asia PR Submissions per Year

2.2 The FIT-Asia meeting was recommended by the FIT-Asia CRA that ICAO Doc 9869 Appendix D guidance should be referred to when submitting PRs, including PBCS data filtering to eliminate duplicate data. The meeting was reminded that analysing performance by individual aircraft and by aircraft operator/aircraft type combination had proven to be significantly more effective than analysing performance by ground station identifier, instilling confidence in the process.

2.3 Singapore, Japan, and New Zealand provided information on how they filtered out the duplicated data before assessing the calculation/assessment. FIT-Asia CRA informed the meeting that the last four characters of the Cyclic Redundancy Check (CRC) might help filter out duplications.

2.4 The FIT-Asia meeting was updated on the transition from VHF to SATCOM issue over the South China Sea. Decommissioning of NTX VHF ground stations at Natuna-Ranai Airport caused a gap in VHF datalink coverage over the South China Sea, affecting PBCS time requirements. Indonesia informed the meeting that the process for NTX reactivation was under process for final approval from the military.

2.5 FIT-Asia CRA expected the ACARS RAT1 function to enhance PBCS time performance during transitions from VHF to SATCOM in areas with limited VHF coverage. This function would be available in newer software for various aircraft models like A320, A330, A340, A350, A380, 737, 747, 757, 767, MD-11, 777, and 787. Boeing provided a timeline for the availability of the ACARS RAT1 function in newer software, with the update for 777 aircraft expected in the fourth quarter of 2024 and for 787 aircraft in the first quarter of 2026. The FIT-Asia CRA informed the meeting that RAT1 background information provided at the previous FIT-Asia meeting was available at FIT-Asia/13 IP2.

2.6 The Secretariat provided an update on the status of PBCS implementation among Asia/Pacific Administrations, as reported using the APAC regional *Survey of the Status of Current and Planned Implementation of Performance-Based Horizontal Separation Minima* form. The FIT-Asia was reminded of relevant Conclusions of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) and the Regional Airspace Safety Monitoring Advisory Group (RASMAG):

***Conclusion APANPIRG/27-7: PBCS Operator Requirements***

***Conclusion RASMAG/22-3: Performance-Based Separation Implementation Survey***

***Conclusion APANPIRG/28-11: PBCS Operational Authorizations***

***Conclusion RASMAG/23-1: PBCS Compliance***

***Conclusion RASMAG/27-2: Updated Reporting of PBCS Implementation Status and Performance Monitoring Data***

2.7 The FIT-Asia meeting was informed that a total of 17 APAC Administrations submitted completed report forms for the 2024 update and report to FIT-Asia/14:

China, Hong Kong China, Fiji, Indonesia, Japan, Malaysia, Mongolia, Nepal, New Zealand, Papua New Guinea, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United States, Viet Nam

2.8 The FIT-Asia meeting was also invited to note that ICAO Asia/Pacific Regional Office would continue to monitor regional implementation, and raise APANPIRG Air Navigation Deficiencies or take other action as necessary in cases where States do not comply with relevant ICAO provisions.

***Competent Airspace Safety Monitoring Organizations List***

2.9 The RASMAG List of Competent Airspace Safety Monitoring Organizations (Last updated 07 June 2023) was reviewed and updated by the FIT-Asia.

2.10 The FIT-Asia meeting was reminded that APANPIRG/34 agreed the following Conclusion proposed by RASMAG/28.

***Conclusion APANPIRG/34/8: Formal Service Arrangements with CRA***

*That, States are urged to ensure that formal service arrangements are made with an APANPIRG-recognised, competent Central Reporting Agency for the submission and analysis of data link problem reports.*

2.11 The United States informed the meeting that the FAA contract for IPACG, ISPACG, and NAT would be expanded to include FIT-Asia States without formal service arrangements with a CRA., excluding SEASMA States.

2.12 The secretariat stated that they would reach out to each state to assess the suitability of the United States' proposed arrangement.

2.13 The FIT-Asia meeting recognised and appreciated the United States for its support of FIT-Asia

***Survey Results for Asia Pacific States PBCS Approval Process***

2.14 ICAO provided the outcome of the survey conducted in 2023 for PBCS Approval Process in APAC States. There were 13 responses to the survey and showed that seven administrations have aircraft operators with PBCS approvals and of which six administration conducted direct Approvals.

2.15 Two administrations did not issue specific operational approvals for PBCS. One example showed that for aircraft to be eligible for PBCS separation, they must have achieved RCP 240 and RSP 180 requirements and registered on the FANS central Reporting Agency Website. Another State required that any pilot in command intending to file a PBCS indicator in their flight plan were to meet a set of regulatory requirements.

2.16 Due to the current situation where there were aircraft operating in the APAC PBCS airspace that did not require PBCS approvals by the State, it would present some challenges for En-route monitoring agencies to conduct their duties and responsibilities relating to checks of approval status of aircraft operating in the relevant airspace where horizontal-plane separation is applied. Therefore, the monitoring agencies should note that aircraft from some States do not contain PBCS approvals and may consider the current operations and determine the need to perform PBCS approval checks within their airspace of responsibility.

***Data Link Performance Reports***

2.17 The FIT-Asia meeting was provided with updated information of Data Link Performance Reports by China, Indonesia, Malaysia, Singapore, and Sri Lanka.

***Asia/Pacific Region Combined PBCS Monitoring Report***

2.18 Japan presented the aggregated data link performance monitoring report for the Asia/Pacific Region, prepared by Japan. **Table 1** listed the FIRs for which data link performance reports were provided and included in the regional report.

**Table 1:** 2023 APAC Combined PBCS Report – Reporting FIRs

Reporting FIRs		
State	FIR	Location Indicator
United States	Anchorage Oceanic	PAZA
Japan	Fukuoka	RJJJ
United States	Oakland Oceanic	KZAK
Fiji	Nadi <sup>*1</sup>	NFFF
French Polynesia	Tahiti	NTTT
New Zealand	Auckland Oceanic	NZZO
Australia	Brisbane	YBBB
	Melbourne	YMMM
Philippines	Manila	RPHI
Sri Lanka	Colombo	VCCF
India	Mumbai <sup>*2</sup>	VABF
	Chennai	VOMF
	Kolkata	VECF
Viet Nam	Ho-Chi-Minh	VVTS
Indonesia	Ujung Pandang	WAAF
Singapore	Singapore	WSJC
China	Lanzhou	ZLLL
	Urumqi	ZWWW
Malaysia	Kuala Lumpur	WMFC

\*1 Nadi: January-October data only

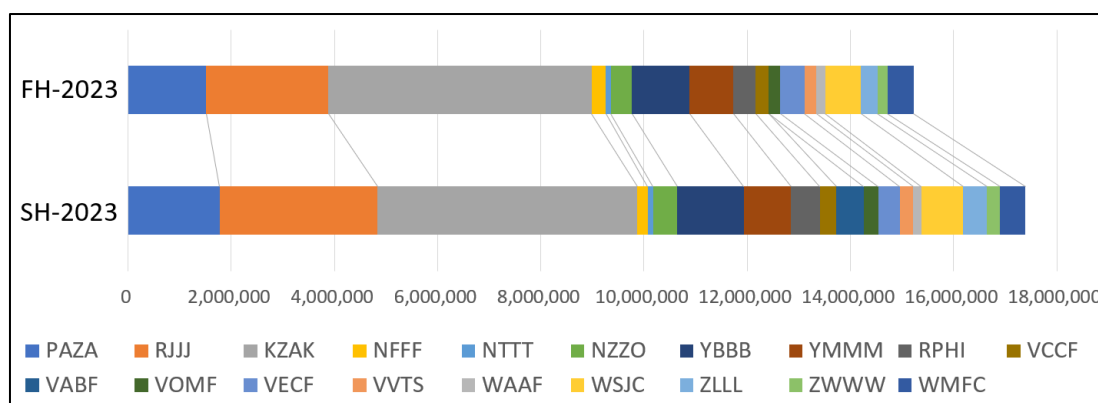
\*2 Mumbai: August-December data only

2.19 **Table 1** showed the combined data for RSP across all media types in 2023. The 95 percent standard was achieved in all FIRs. None of the FIRs met the 99.9 percent standard, but all FIRs except Chennai achieved a clearance rate of 99.0 percent.

**Table 1: RSP Aggregated Data (All Media Types)**

ACTUAL SURVEILLANCE PERFORMANCE - FIR AGGREGATE (ALL MEDIA TYPES)						
Region	Asia-Pacific Region					
Performance Criteria	RSP180					
Time Period	2023 January-June			2023 July-December		
<div> <div>Colour Key</div> <div> <div>Meets Criteria</div> <div>99.0%-99.84%</div> <div>Under Criteria</div> </div> </div>	Message Counts	Criteria		Message Counts	Criteria	
		95%	99.90%		95%	99.90%
		% < = 90sec	% < = 180sec		% < = 90sec	% < = 180sec
FIR						
PAZA	1510971	98.85%	99.65%	1774333	98.33%	99.48%
RJJJ	2371615	98.41%	99.62%	3057643	98.43%	99.58%
KZAK	5103764	98.85%	99.73%	5040555	98.68%	99.58%
NFFF	271083	99.11%	99.61%	197629	98.99%	99.53%
NTTT	95276	99.58%	99.80%	103928	99.56%	99.82%
NZZO	414330	98.97%	99.70%	471687	98.81%	99.64%
YBBB	1116402	99.52%	99.83%	1286584	99.50%	99.82%
YMMM	846180	99.05%	99.55%	913946	99.50%	99.81%
RPHI	431079	98.39%	99.31%	563565	98.37%	99.35%
VCCF	255585	98.79%	99.59%	321497	98.59%	99.73%
VABF				522944	97.49%	99.15%
VOMF	226298	97.16%	98.72%	287769	99.11%	99.14%
VECF	470003	98.21%	99.23%	417838	98.36%	99.25%
VVTS	227123	98.85%	99.75%	254460	98.92%	99.75%
WAAF	169637	98.94%	99.43%	158334	99.14%	99.58%
WSJC	694972	98.99%	99.80%	813004	99.07%	99.84%
ZLLL	323166	98.60%	99.70%	463475	98.50%	99.60%
ZWWW	193406	98.60%	99.70%	252168	98.50%	99.60%
WMFC	503742	98.85%	99.68%	487506	99.01%	99.73%

2.20 The FIT-Asia meeting was informed that **Figure 2** illustrated the numbers of RSP message counts in most FIRs increased from the first half of 2023 to the second half of 2023. The FIRs which recorded more than 20 percent increase were Fukuoka, Manila, Colombo, Chennai, Lanzhou and Urumqi.



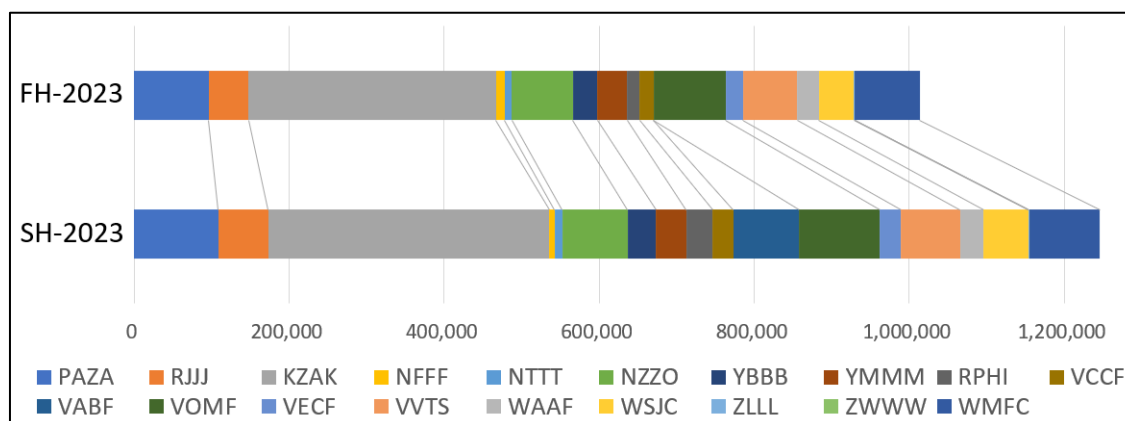
**Figure 1: RSP Message Counts of Each FIR in 2023**

2.21 The 95 percent ACP criteria were met in all FIRs except for the second half of 2023 in Ho Chi Minh FIR. Although Urumqi FIR achieved all criteria in the whole of 2023, the numbers of message counts were below one hundred (**Table 3**).

**Table 3: RCP Aggregated Data (All Media Types) in 2023**

ACTUAL COMMUNICATION PERFORMANCE - FIR AGGREGATE (ALL MEDIA TYPES)										
Region	Asia-Pacific Region									
Performance Criteria	RCP240									
Time Period	2023 January-June					2023 July-December				
Colour Key Meets Criteria 99.0%-99.84% Under Criteria	Message Counts	ACP Criteria		ACTP Criteria		Message Counts	ACP Criteria		ACTP Criteria	
		95%	99.90%	95%	99.90%		95%	99.90%	95%	99.90%
FIR		% < = 180sec	% < = 210sec	% < = 120sec	% < = 150sec		% < = 180sec	% < = 210sec	% < = 120sec	% < = 150sec
PAZA	96168	99.24%	99.51%	99.35%	99.55%	108973	99.22%	99.47%	99.32%	99.52%
RJJJ	51322	99.70%	99.83%	99.74%	99.81%	64259	99.67%	99.80%	99.72%	99.80%
KZAK	319665	99.32%	99.57%	99.52%	99.68%	362176	99.31%	99.54%	99.49%	99.65%
NFFF	10739	99.43%	99.66%	99.65%	99.73%	6856	99.64%	99.75%	99.72%	99.78%
NTTT	9370	99.55%	99.59%	99.80%	99.83%	9848	99.63%	99.70%	99.77%	99.80%
NZZO	78677	99.07%	99.36%	99.53%	99.71%	84773	99.13%	99.40%	99.49%	99.65%
YBBB	31567	99.53%	99.67%	99.54%	99.70%	36095	99.45%	99.67%	99.45%	99.60%
YMMM	38482	99.44%	99.60%	99.45%	99.62%	39375	99.69%	99.81%	99.71%	99.80%
RPHI	16263	98.01%	98.26%	98.74%	98.91%	34167	98.04%	98.30%	98.60%	98.77%
VCCF	17768	99.19%	99.50%	99.88%	99.94%	26493	99.49%	99.64%	99.88%	99.91%
VABF						84996	98.66%	99.16%	99.38%	99.68%
VOMF	92927	99.72%	99.81%	99.79%	99.85%	103692	99.74%	99.83%	99.83%	99.88%
VECF	22343	98.63%	98.98%	99.01%	99.15%	27550	99.15%	99.36%	99.42%	99.60%
VVTS	70225	95.19%	95.78%	99.41%	99.60%	76131	94.76%	95.37%	99.60%	99.74%
WAAF	27512	99.19%	99.73%	99.36%	99.80%	30676	99.28%	99.44%	99.65%	99.72%
WSJC	45547	98.94%	99.19%	99.05%	99.32%	57158	99.21%	99.44%	99.31%	99.53%
ZLLL	1178	97.96%	98.13%	99.06%	99.32%	1475	98.03%	98.16%	99.05%	99.45%
ZWWW	13	100.00%	100.00%	100.00%	100.00%	19	100.00%	100.00%	100.00%	100.00%
WMFC	83576	98.98%	99.18%	99.31%	99.52%	91156	99.04%	99.28%	99.37%	99.56%

2.22 **Figure 3** illustrated the RCP message counts for each FIR in 2023, while Table 22 indicated that the majority of FIRs saw an increase in message counts from the first to the second half of the year. FIRs such as Fukuoka, Manila, Colombo, Kolkata, Singapore, Lanzhou, and Urumqi experienced over a 20 percent rise. Notably, the Manila FIR saw its message counts more than double during this period.



**Figure 3: RCP Message Counts of Each FIR in 2023**

2.23 **Table 4** provided a detailed breakdown of the combinations of airlines and aircraft types that did not meet PORT compliance, with message counts exceeding one thousand in the first or second half of 2023. During FIT-Asia/13, the MD11 operated by FedEx Express (FDX) had poor PORT performance in the Pacific Ocean airspace in 2022 at KZAK, RJJJ, and PAZA. However, the PORT performance of these specific aircraft has since improved, meeting PORT criteria in 2023. The A359 operated by Singapore Airlines (SIA) had PORT issues in RPHI throughout 2023, starting from the second half of 2022.

**Table 4:** Combinations of Aircraft Operators and Types Confirmed Non-Compliance of PORT

Performance Criteria		RCP240											
Period		2023 January-June						2023 July-December					
<div>Colour Key</div> <div><div>Meets Criteria</div><div>99.0%-99.84%</div><div>Under Criteria</div></div>		Message Counts	ACP Criteria		ACTP Criteria		PORT	Message Counts	ACP Criteria		ACTP Criteria		PORT
			95%	99.90%	95%	99.90%	95%		95%	99.90%	95%		
			% < =	% < =	% < =	% < =	% < =		% < =	% < =	% < =		
			180sec	210sec	120sec	150sec	60sec		180sec	210sec	120sec	150sec	60sec
FIR	Aircraft Operator / Type	By Aircraft Operator / Type (only message counts >100 recorded)											
PAZA	CPA/B748	2594	96.34%	97.88%	95.99%	97.19%	95.07%	2926	98.02%	99.32%	98.80%	99.08%	94.74%
KZAK	UAL/B738	4801	97.58%	98.46%	98.33%	99.29%	94.42%	6815	97.42%	98.33%	98.33%	99.22%	94.42%
KZAK	MIL/C17	3100	98.55%	98.71%	99.74%	99.81%	94.48%	3841	98.13%	98.41%	99.66%	99.82%	94.32%
KZAK	MIL/K35R	1574	98.28%	98.73%	99.49%	99.49%	92.76%	1517	98.75%	99.14%	99.80%	99.80%	91.30%
KZAK	VOZ/B38M							1091	96.70%	97.98%	98.35%	98.53%	94.50%
RPHI	CAL/A359	980	95.56%	96.08%	95.05%	95.82%	94.56%	1344	94.72%	95.24%	94.70%	95.16%	93.38%
RPHI	CSN/B789	1009	97.57%	97.68%	96.45%	96.86%	95.98%	2282	95.97%	96.33%	95.57%	96.01%	93.73%
RPHI	SIA/A359	1247	96.44%	96.74%	97.34%	97.79%	93.10%	2354	95.16%	95.77%	95.13%	95.80%	92.82%
RPHI	SIA/B78X	645	96.51%	96.74%	95.87%	96.35%	94.57%	1402	95.86%	96.14%	95.76%	96.14%	93.44%
VCCF	ETD_B77W	774	99.90%	99.90%	100.00%	100.00%	99.95%	1012	99.54%	99.54%	99.80%	99.80%	93.17%
VCCF	GIA_B77W	892	99.77%	99.91%	100.00%	100.00%	99.92%	1826	99.81%	99.93%	100.00%	100.00%	90.06%
VCCF	LNI_A333	1493	99.89%	99.94%	100.00%	100.00%	99.95%	1593	100.00%	100.00%	100.00%	100.00%	90.06%
VCCF	MAS_B738	552	99.33%	99.49%	99.67%	100.00%	99.62%	1477	99.41%	99.41%	99.85%	99.85%	94.63%
VCCF	QTR_A388	626	97.81%	97.81%	98.74%	99.66%	94.78%	1041	99.69%	100.00%	100.00%	100.00%	93.40%
VCCF	SVA_B77W	914	99.69%	99.79%	100.00%	100.00%	99.85%	2281	95.61%	99.10%	97.82%	99.24%	94.17%
VABF	ALK/A333							1287	98.95%	99.32%	99.71%	100.00%	94.02%
VABF	ETD/A320							1006	95.56%	96.92%	98.93%	99.24%	88.87%
VABF	ETD/A321							1481	94.73%	96.60%	98.67%	98.91%	87.58%
VABF	QTR/A333							1393	98.38%	98.99%	99.85%	99.95%	93.54%
VABF	SVA/A333							1640	97.41%	98.35%	99.88%	99.91%	86.46%
VVTS	CAL	1762	95.52%	96.00%	99.82%	99.96%	92.19%	1086	95.27%	95.95%	99.55%	99.85%	91.48%
VVTS	CES	355	92.92%	93.75%	98.92%	99.06%	90.14%	1009	95.14%	95.76%	99.43%	99.50%	92.41%
VVTS	CPA	2018	92.63%	93.26%	99.86%	99.89%	88.73%	2720	94.19%	94.67%	99.92%	99.97%	89.85%
VVTS	EVA	1931	96.79%	97.16%	99.74%	99.85%	94.41%	1361	96.03%	96.39%	99.87%	100.00%	92.65%
VVTS	KAL	3649	94.71%	95.47%	99.47%	99.70%	91.26%	2748	92.83%	93.51%	99.54%	99.76%	88.83%
VVTS	MAS	1647	95.90%	96.77%	99.40%	99.50%	93.14%	2285	95.65%	96.39%	99.26%	99.40%	93.26%
VVTS	SCO	2739	96.89%	97.20%	99.89%	99.98%	94.93%	3616	95.60%	96.02%	99.92%	99.95%	93.86%
VVTS	SIA	1225	93.55%	94.60%	98.86%	99.53%	90.86%	1699	93.47%	95.00%	98.68%	99.35%	90.64%
VVTS	XAX	966	95.31%	95.65%	99.72%	99.83%	92.34%	1706	94.57%	95.01%	99.56%	99.78%	91.44%
WAAF	CPA/B77W	395	98.88%	99.23%	100.00%	100.00%	91.14%	1088	98.53%	99.51%	100.00%	100.00%	94.12%
WMFC	MAS/B738	2127	96.10%	97.46%	97.13%	98.92%	91.07%	2617	94.31%	96.22%	95.91%	98.24%	89.49%
WMFC	SIA/B38M	1345	97.11%	97.81%	98.14%	98.71%	93.83%	1527	96.23%	97.31%	98.15%	98.85%	92.53%
WMFC	SVA/B78X	885	98.66%	98.98%	99.47%	100.00%	95.25%	1022	97.85%	99.07%	99.66%	100.00%	94.72%
WMFC	THY/B77W	2809	98.50%	99.06%	98.97%	99.42%	95.09%	1562	98.44%	99.24%	98.58%	99.17%	92.38%

2.24 The FIT-Asia meeting was informed that the details, including PBCS data provided by States/Administrations, could be found in **FIT-Asia/14 WP/12 Attachment A - E**.

2.25 States/Administrations were invited to double-check the data before submission each year to avoid format errors and consistency issues.

2.26 The FIT-Asia meeting acknowledged Japan for its contribution to the forum. The FIT-Asia meeting also agreed that Indonesia and Malaysia had volunteered for task to compile the data jointly for two years from 2025.

*Sharing of SATCOM-related Investigation*

2.27 China presented the annual technical matters review for CPDLC and ADS-C over Lanzhou and Urumqi FIR. China noted the performance of APK2 was above the SATCOM half-year average whereas the XXP, with less data count, failed to meet the 95% benchmark in the whole year despite both services were provided through the same satellite. China explained the performance difference lied with different ACARS service providers.

2.28 China reported on their follow-up actions to the RAT1 function in response to the IP/02 of FIT-Asia/13. They examined the data of several underperformed B777 aircraft and noted by the operators that those underperformed fleet had updated the system and software to the latest version which would solve the issue.

*Monitoring Comparison APK vs XXA SATCOM*

2.29 In response to points raised in the Flimsy/1 provided by China, New Zealand provided additional information on a comparison between ARINC/SITA SATCOM performance using ADS-C downlinks in NZZO FIR and the use of such data by Airways New Zealand.

2.30 With the information from New Zealand, it was concluded that the poor performance through an RGS was likely to be related to the individual aircraft performance using the RGS.

2.31 For comparison purpose, New Zealand shared the ADS-C Performance data and noted no performance difference between SITA/ARINC RGS in NZZO.

*PBCS Long-Term Monitoring Mechanism in China*

2.32 China presented an introduction to PBCS Long-Term Monitoring and actions taken in China. In accordance with ICAO Doc 9869 and ICAO Doc 10037, strict safety oversight of air traffic services and ongoing monitoring are essential for the successful implementation of RCP and RSP specifications. Since the initial implementation, ongoing efforts have been to create a sustainable monitoring system. In October 2022, the CAAC Air Traffic Management Bureau (ATMB) introduced the PBCS Regulation, which details the monitoring responsibilities. This document seeks to outline the process of long-term monitoring in China.

2.33 The FIT-Asia meeting was informed that China RMA reached out to the States to initiate a discussion, urging all parties involved to approach the issues from a new angle and take proactive steps towards resolving the problem.

*PBCS Monitoring Guidance*

2.34 New Zealand presented information on current PBCS performance monitoring by Airways New Zealand, including a case study for illustration. In addition, it was recommended that the guidance material on PBCS monitoring NAT Doc 011 guidance to be incorporated into the Asia Pacific Guidance Material for end-to-end safety and performance monitoring of ATS data link systems.

2.35 The NAT guidance focused on the reporting and filtering of under-performing airframes and providing guidance for State Oversight Authorities. The guidance is broken down into three phases namely: Phase 1 – ATSP, Phase 2 – RMA and Phase 3 – State Oversight Authority, and is reliant on the positive participation of aircraft operators in accordance with the PBCS Global Charter.



*Review of Guidance Material for End-To-End Safety and Performance Monitoring of ATS Data Link Systems in the Asia/Pacific Region*

2.36 As an outcome of Task item RASMAG28/1, ICAO proposed amendments to the Guidance Material for End-to-End Safety and Performance Monitoring of ATS Data Link Systems in the APAC Region.

2.37 The FIT-Asia meeting agreed to the changes in the Guidance Material for End-to-End Safety and Performance Monitoring of ATS Data Link Systems in the APAC Region, inclusion of EUR NAT Doc 011 on the ICAO APAC eDocument and the following draft conclusion:

***Draft Conclusion FIT-Asia/14-1: Revised Guidance Material for End-to-End Safety and Performance Monitoring of ATS Data Link Systems in the APAC Region and Additional PBCS Guidance Material NAT Doc 011***

*That, the revised Guidance Material for End-to-End Safety and Performance Monitoring of ATS Data Link Systems in the APAC Region at **Appendix D to the report** be adopted and uploaded to the Asia/Pacific Regional Office eDocuments webpage to replace the existing version;*

*and the EUR NAT Doc 011 – PBCS Monitoring and Reporting Guidance, 1st Ed.- Amdt. 2, at **WP/15 Attachment 1** be uploaded on the ICAO Asia/Pacific Regional Office eDocuments webpage.*

2.38 This matter would be further discussed under Agenda Item 4: Airspace Safety Monitoring Documentation and Regional Guidance Material.

*Inmarsat Aeronautical Satellite Safety Communications Update*

2.39 Inmarsat presented an update of their satellite network and services for aeronautical communications to support Air Traffic Management and safety operations as an ICAO Charter stakeholder.

2.40 The FIT-Asia meeting was informed on the satellite fleet arrangement carried out in 2023 and the upcoming plans for the L-band satellite strategy. Inmarsat also provided information regarding their network and system updates to enhance resiliency and performance monitoring.

2.41 The FIT-Asia meeting raised concerns on the issue of satellite I4F1 being relocated for contingency use only and the single satellite coverage over part of the Pacific Ocean. Inmarsat claimed that due to technical issue, satellite I4F1's capability was reduced requiring relocation to provide contingency service only while another satellite took over the service. Inmarsat supplemented that more satellites were planned to launch and expected in 2026, the Pacific would be supported with dual coverage.

*Air Navigation Deficiencies Relating to Data Link Performance Monitoring and Analysis*

2.42 The Secretariat presented an update on the status of Asia/Pacific engagement in data link problem reporting through the FANS-CRA website, and performance analysis reporting to a recognised FIT.

2.43 The Secretariat presented the relevant excerpt of the APANPIRG ATM and Airspace Safety Deficiencies List for review by the meeting.

**Maldives:** Problem reports not provided to CRA. Performance monitoring and analysis

not reported to FIT.

**India:** Performance monitoring and analysis not reported for Mumbai FIR.

2.44 The meeting was informed that India provided the PBCS Performance Monitoring Analysis and Reporting for Mumbai FIR for five months last year (i.e., August – December 2023) with ICAO APAC. However, India did not respond to the survey on the Status of Current and Planned Implementation of Performance-Based Horizontal Separation Minima in 2024. This lack of response, along with the absence of a WP on the Data Link Performance Report to FIT-Asia/14, has left FIT-Asia/14 without sufficient data/evidence to discuss the deficiency.

2.45 The meeting was also informed that Maldives had not provided PRs to CRA or reported performance monitoring and analysis to FIT. However, Maldives had disabled the ADS-C function from the ATM system due to an application issue, and CPDLC/HF is used beyond VHF coverage.

2.46 The meeting agreed that India's deficiency remained current.

2.47 The meeting also agreed that since Maldives did not attend the FIT-Asia/14, ICAO secretariat would further investigate the matter for follow-up discussion at the upcoming RASMAG/29 meeting in August 2024 to determine if the deficiency would be appropriate. This matter would be discussed under Agenda Item 6 at RASMAG/29.

#### *Future Direction of FIT-Asia*

2.48 The secretariat provided information on the history and progress of FIT-Asia, and proposed changes under consideration.

2.49 The number of Working Papers (WP) and Information Papers (IP) provided by States/Administrations, International Organisations, CRA, and RMAs at the previous FIT-Asia meetings was introduced. Additionally, many of the WPs provided by States/Administrations were Data Link Performance Reports, and a few papers addressed technical matters to be discussed at the FIT-Asia meetings by the champion States in the region.

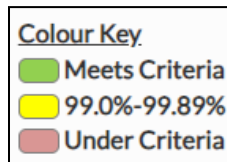
2.50 The FIT-Asia meeting agreed to conduct a workshop/seminar in conjunction with the FIT-Asia meeting, at least in 2025, including the subjects such as safety risk assessment for PBCS implementation, PBCS Charter, etc.

2.51 China, Japan, New Zealand, USA, Boeing, and Inmarsat expressed their support for the future seminar/workshop. Additionally, New Zealand mentioned that they would be pleased to support the PBCS implementation individually if a State required it, particularly in PBCS data analysis. Subsequently, States were encouraged to reach out to New Zealand.

#### *Asia/Pacific PBCS Reporting Templates*

2.52 It was noted from Asia/Pacific Region Combined PBCS Monitoring Report provided by Japan, that the colour codes used by FIT-Asia were slightly different to other FIT's therefore a correction proposed to the templates to resolve this error.

2.53 The current colour key was incorrect and a revised yellow acceptable performance showing as between 99.0% and 99.89% was proposed (**Figure 4**).



**Figure 4:** Revised Colour Key Code for Yellow Acceptable Performance

2.54 FIT-Asia meeting agreed to revised colour key codes in the following files on the ICAO APAC eDocument webpage (**Attachment A, B, and C**) shown below and the following draft conclusion.

***Draft Conclusion FIT-Asia/14-2: Revised colour key codes for Asia/Pacific PBCS reporting templates***

*That, the following PBCS reporting templates and example were revised to correctly reflect the criteria colour key code for yellow acceptable performance and be uploaded to the Asia/Pacific Regional Office to replace the existing ones.*

1. *Data Link Performance Report Template – ANSP to FIT (Appendix F);*
2. *EXAMPLE - Data Link Performance Report Template – ANSP to FIT (Appendix G); and*
3. *Aggregated Regional Data Link Performance Report Template - FIT to RASMAG (Appendix H)*

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) note the regional PBCS implementation Status;
- c) note the continued need to encourage States to fully analyse PBCS performance that fails to meet RCP/RSP specifications, take rectification action, and report same to FIT;
- d) note the aggregated regional PBCS performance;
- e) note and agree to the Draft Conclusion below: Revised colour key codes for Asia/Pacific PBCS reporting templates;
- f) note and agree to the FIT-Asia/14 recommendations on data link-related APANPIRG ATM and Airspace Safety Deficiencies; and
- g) discuss any relevant matters as appropriate.

.....


<b>Draft Conclusion RASMAG/29-X: Revised colour key codes for Asia/Pacific PBCS reporting templates</b>	
<p>What: That, the following PBCS reporting templates and example were revised to correctly reflect the criteria colour key code for yellow acceptable performance.</p> <ol style="list-style-type: none"> <li>1. Data Link Performance Report Template – ANSP to FIT (<b>Appendix xx to the report</b>);</li> <li>2. EXAMPLE - Data Link Performance Report Template – ANSP to FIT (<b>Appendix xx to the report</b>); and</li> <li>3. Aggregated Regional Data Link Performance Report Template - FIT to RASMAG (<b>Appendix xx to the report</b>).</li> </ol> <p>The above files to be uploaded on the ICAO Asia/Pacific Regional Office eDocuments webpage.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To reflect the correct colour key code in the Asia/pacific PBCS reporting templates to be consistent with other FIT.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 22-Aug-24</p>	<p>Status: Draft to be adopted by Subgroup</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX</p>	


[illegible]


**By Aircraft Operator / Type** (only message counts >100 recorded)

[illegible]

Colour Key

 Meets Criteria

 99.0%-99.89%

 Under Criteria



FIR	NZZO					
Criteria	RSP180					
Period	Jan-June 2023			July-December 2023		
<b>Colour Key</b> <span style="color: green;">■</span> Meets Criteria <span style="color: yellow;">■</span> 99.0%-99.89% <span style="color: red;">■</span> Under Criteria	Message Counts	95% % <= 90sec	99.90% % <= 180sec	Message Counts	95% % <= 90sec	99.90% % <= 180sec
<b>By Media Type</b>						
SATCOM	337695	98.81	99.66	382399	98.61	99.59
VHF	76376	99.75	99.92	89058	99.7	99.87
HF	259	74.13	84.16	230	69.56	85.65
ALL	414330	98.97	99.7	471687	98.81	99.64
<b>By Remote Ground Station (RGS) Ground Earth Station (GES)</b>						
Designator	Type	(only RGS/GES with message counts >100 recorded)				
AKL	VDL	6434	99.75	99.9	7720	99.79
AKL1	VDL	856	100	100	878	99.88
AKL2	VDL	6425	99.09	99.89	7099	98.81
AKL7	VDL	4168	99.97	99.97	5652	99.96
AKL8	VDL	21360	99.92	99.96	20269	99.96
AKLV	VDL	1419	99.71	99.85	1441	100
AME1	SAT	13297	99.7	99.92	16016	99.25
AME2	SAT	2659	99.81	99.92	4050	99.5
AME7	SAT				470	99.57
AME8	SAT				288	100
APK1	SAT	151812	99.19	99.82	175089	98.92
APK2	SAT	8732	99.54	99.89	7052	99.37
APK7	SAT				1600	98.5
APK8	SAT				889	98.98
APW1	VDL	4432	99.66	99.72	5198	99.9
CHC	VDL	356	100	100	436	100
CHC1	VDL	252	97.22	99.2	259	96.91
CHC2	VDL	282	97.51	100	243	95.47
CHC7	VDL	1913	99.94	100	1777	99.88
CHC8	VDL	1535	99.93	100	1419	99.92
CHCV	VDL	383	100	100	619	99.83
H05	HF	208	77.4	86.05	186	74.19
HLZ	VDL	1097	99.72	99.9	728	100
HLZ1	VDL	269	99.62	100	299	98.99
IG1	SAT	2287	96.76	98.51	1687	97.09
IGW1	SAT	77675	97.38	99.23	83026	96.95
IOR5	SAT				197	97.46
IVC1	VDL	754	97.21	99.6	956	98.22

FIR	NZZO					
Criteria	RSP180					
Period	Jan-June 2023			July-December 2023		
<b>Colour Key</b> <span style="color: green;">■</span> Meets Criteria <span style="color: yellow;">■</span> 99.0%-99.89% <span style="color: red;">■</span> Under Criteria	Message Counts	95% % <= 90sec	99.90% % <= 180sec	Message Counts	95% % <= 90sec	99.90% % <= 180sec
<b>By Aircraft Operator / Type</b> (only message counts >100 recorded)						
AAL/B77W	4234	98.91%	99.34%	9511	98.92%	99.32%
AAL/B788				108	100.00%	100.00%
AAL/B789	8290	99.92%	100.00%	4762	99.87%	99.98%
ACA/B77L	273	98.53%	100.00%	468	97.86%	98.50%
ACA/B789	3732	99.01%	99.65%	2015	98.91%	99.80%
ACI/A20N	2173	98.44%	99.54%	2312	98.36%	99.35%
ACI/A339	1467	99.25%	99.93%	1563	100.00%	100.00%
ANZ/A20N	36588	97.70%	99.62%	36744	97.52%	99.73%
ANZ/A21N	40944	98.22%	99.44%	46025	97.44%	99.14%
ANZ/B77W	35456	99.28%	99.71%	52449	98.88%	99.59%
ANZ/B789	73626	99.34%	99.94%	70165	99.12%	99.94%
ASY/A332	163	100.00%	100.00%	228	99.56%	100.00%
ASY/C17	109	100.00%	100.00%	237	96.20%	97.89%
ASY/C30J	101	100.00%	100.00%	147	98.64%	100.00%
ASY/FA7X	242	97.93%	98.35%	174	98.85%	100.00%
AWC/A21N				140	97.86%	100.00%
CAL/A359	2668	99.06%	99.85%	2951	99.36%	100.00%
CAL/B77L	155	98.71%	100.00%			
CCA/A332				171	100.00%	100.00%
CCA/B789	678	98.53%	99.26%	2891	98.93%	99.34%
CES/A332	1996	100.00%	100.00%	1222	99.92%	100.00%
CES/B77W	928	99.25%	99.46%	3560	98.96%	99.47%
CES/B789	101	100.00%	100.00%	1967	99.90%	99.90%
CHH/A333	238	100.00%	100.00%			
CKS/B744	346	98.55%	100.00%			
CKS/B77L	5143	98.41%	99.38%	1240	98.23%	99.03%
CPA/A359				202	100.00%	100.00%
CPA/A35K	1780	99.89%	100.00%	2062	99.37%	99.95%
CSN/A359	405	100.00%	100.00%	331	100.00%	100.00%
CSN/B789	3266	99.91%	99.97%	5617	99.54%	99.93%
DAL/A359	8060	99.50%	99.94%	12381	99.56%	99.92%
DOD/K35R	131	86.26%	90.84%			
FDX/B77L	1134	98.85%	99.74%	1123	97.77%	99.02%
FJI/A332	5705	98.02%	99.67%	4167	96.33%	98.78%

FIR	NZZO										
Criteria	RCP240										
Period	Jan - Jun 2023					Jul - Dec 2023					
<div>Colour Key</div> <div><div>Meets Criteria</div><div>99.0%-99.89%</div><div>Under Criteria</div></div>	Message Counts	95% benchmark		99.9% Benchmark		Message Counts	95% benchmark		99.9% Benchmark		
		ACP	ACTP	ACP	ACTP		ACP	ACTP	ACP	ACTP	
		% < = 180sec	% <= 120sec	% < = 210sec	% <= 150sec		% < = 180sec	% <= 120sec	% < = 210sec	% <= 150sec	
By Media Type											
SATCOM	68738	99.03%	99.53%	99.35%	99.70%	74291	99.08%	99.48%	99.36%	99.63%	
VHF	9827	99.64%	99.83%	99.71%	99.91%	10372	99.69%	99.73%	99.82%	99.91%	
HF	112	75.00%	76.78%	77.67%	82.14%	110	83.63%	87.27%	90.00%	91.81%	
ALL	78677	99.07%	99.53%	99.36%	99.71%	84773	99.13%	99.49%	99.40%	99.65%	
By Remote Ground Station (RGS) Ground Earth Station (GES)											
Designator	Type	(RGS/GES with message counts > 100)									
AKL	VDL	973	99.28%	99.58%	99.28%	99.58%	1109	99.63%	99.90%	99.81%	100.00%
AKL2	VDL	1285	99.84%	99.84%	99.84%	99.92%	1049	100.00%	100.00%	100.00%	100.00%
AKL7	VDL	316	100.00%	99.36%	100.00%	100.00%	394	99.23%	99.23%	99.49%	99.49%
AKL8	VDL	2105	99.61%	99.71%	99.80%	99.95%	1812	99.61%	99.11%	99.83%	99.77%
AKLV	VDL	168	100.00%	100.00%	100.00%	100.00%	161	99.37%	100.00%	100.00%	100.00%
AME1	SAT	1813	99.39%	99.72%	99.39%	99.88%	2071	99.61%	99.71%	99.71%	99.85%
AME2	SAT	372	98.65%	99.73%	98.92%	99.73%	494	98.98%	98.98%	99.39%	99.39%
APK1	SAT	30442	99.37%	99.63%	99.62%	99.78%	32789	99.33%	99.55%	99.60%	99.70%
APK2	SAT	1853	99.62%	99.89%	99.78%	99.89%	1344	99.25%	99.55%	99.47%	99.77%
APK7	SAT						260	99.23%	100.00%	99.61%	100.00%
APK8	SAT						134	99.25%	100.00%	99.25%	100.00%
APW1	VDL	831	100.00%	100.00%	100.00%	100.00%	950	100.00%	100.00%	100.00%	100.00%
CHC7	VDL	150	100.00%	100.00%	100.00%	100.00%	140	100.00%	98.57%	100.00%	100.00%
CHC8	VDL	102	100.00%	100.00%	100.00%	100.00%					
HLZ	VDL	123	100.00%	100.00%	100.00%	100.00%	100	100.00%	100.00%	100.00%	100.00%
IG1	SAT	426	92.25%	95.53%	94.36%	98.12%	298	96.64%	97.65%	97.31%	98.99%
IGW1	SAT	18403	98.20%	99.26%	98.75%	99.54%	19242	98.29%	99.12%	98.71%	99.33%
IVC1	VDL	126	100.00%	100.00%	100.00%	100.00%	198	100.00%	100.00%	100.00%	100.00%
RAR1	VDL	378	99.20%	99.73%	99.20%	99.73%	707	99.85%	100.00%	99.85%	100.00%
SUV1	VDL	146	97.94%	100.00%	98.63%	100.00%					
TBU1	VDL	2627	99.58%	99.96%	99.61%	99.96%	2149	99.67%	99.95%	99.76%	100.00%
XSN7	VDL						428	99.53%	99.06%	100.00%	99.53%
XXA	SAT	11664	99.47%	99.70%	99.66%	99.76%	13424	99.36%	99.70%	99.57%	99.77%
XXH	SAT	697	98.42%	99.13%	98.99%	99.28%	1239	99.59%	99.83%	99.75%	99.83%
XXP	SAT	2614	99.46%	99.77%	99.65%	99.77%	2809	99.67%	99.85%	99.71%	99.85%
XXU	SAT						204	99.50%	100.00%	99.50%	100.00%
XXW	SAT	407	99.26%	99.75%	99.26%	99.75%	375	99.73%	100.00%	99.73%	100.00%

FIR	NZZO											
Criteria	RCP240											
Period	Jan - Jun 2023						Jul - Dec 2023					
<div>Colour Key</div> <div>Meets Criteria</div> <div>99.0%-99.89%</div> <div>Under Criteria</div>	Message Counts	95% benchmark		99.9% Benchmark		95%	Message Counts	95% benchmark		99.9% Benchmark		95%
		ACP	ACTP	ACP	ACTP	PORT		ACP	ACTP	ACP	ACTP	PORT
		% <= 180sec	% <= 120sec	% <= 210sec	% <= 150sec	%<60secs		% <= 180sec	% <= 120sec	% <= 210sec	% <= 150sec	%<60secs
By Aircraft Operator / Type (only message counts >100 recorded)												
AAL/B77W	816	99.26%	99.87%	99.26%	99.87%	98.28%	1588	99.31	99.49%	99.62	99.62%	98.55%
AAL/B789	1430	99.93%	100.00%	100.00%	100.00%	99.44%	703	99.86	100.00%	99.86	100.00%	99.00%
ACA/B789	577	99.48%	99.13%	99.83%	99.13%	99.30%	319	99.69%	98.43%	100.00%	99.05%	98.43%
ACI/A20N	360	99.72%	100.00%	99.72%	100.00%	98.61%	362	100.00%	99.72%	100.00%	100.00%	99.17%
ACI/A339	185	100.00%	100.00%	100.00%	100.00%	98.91%	189	100.00%	100.00%	100.00%	100.00%	98.41%
ANZ/A20N	8016	98.75%	99.65%	99.13%	99.83%	96.83%	8081	98.87%	99.50%	99.26%	99.82%	97.06%
ANZ/A21N	8844	98.64%	99.43%	99.04%	99.77%	96.85%	9538	98.67%	99.30%	98.99%	99.41%	97.27%
ANZ/B77W	6677	99.36%	99.65%	99.52%	99.79%	97.94%	8635	99.07%	99.50%	99.43%	99.55%	97.85%
ANZ/B789	13329	99.55%	99.55%	99.81%	99.80%	98.87%	12180	99.55%	99.37%	99.81%	99.77%	99.12%
CAL/A359	559	99.28%	99.28%	99.28%	99.28%	97.49%	586	99.32%	99.31%	99.32%	99.48%	99.14%
CCA/B789	150	98.67%	100.00%	99.33%	100.00%	96.00%	612	99.84%	100.00%	99.84%	100.00%	99.83%
CES/A332	426	99.30%	99.53%	99.53%	99.76%	97.18%	244	99.18%	99.59%	99.59%	100.00%	97.95%
CES/B77W	209	99.04%	99.04%	99.04%	99.04%	99.04%	782	99.62%	99.74%	99.74%	99.74%	99.61%
CHH/A333	-	-	-	-	-	-	353	100.00%	100.00%	100.00%	100.00%	97.00%
CKS/B77L	826	99.15%	99.03%	99.64%	99.27%	98.18%	200	100.00%	100.00%	100.00%	100.00%	99.15%
CPA/A35K	404	100.00%	100.00%	100.00%	100.00%	98.01%	458	99.56%	99.34%	100.00%	99.78%	98.25%
CSN/B789	721	98.75%	99.16%	98.75%	99.30%	98.75%	1204	99.58%	99.83%	99.75%	99.83%	99.08%
DAL/A359	1475	99.25%	99.59%	99.66%	99.66%	97.08%	2065	99.27%	99.80%	99.47%	99.80%	96.99%
FDX/B77L	180	98.89%	100.00%	99.44%	100.00%	97.77%	165	97.58%	98.78%	98.18%	99.39%	96.36%
FJI/A332	1134	98.85%	99.20%	99.29%	99.47%	97.88%	739	97.56%	98.10%	98.24%	99.05%	94.04%
FJI/A333	297	99.66%	100.00%	100.00%	100.00%	96.96%	334	99.10%	98.80%	99.70%	99.40%	96.70%
FJI/A359	760	99.74%	99.86%	99.87%	99.86%	98.68%	1241	99.76%	100.00%	99.76%	100.00%	98.63%
FJI/B38M	3176	97.13%	98.58%	98.08%	98.77%	95.27%	3043	96.68%	98.12%	97.31%	98.22%	95.72%
GTI/B744	131	100.00%	100.00%	100.00%	100.00%	98.47%	166	98.80%	99.39%	99.40%	100.00%	98.79%
HAL/A21N	-	-	-	-	-	-	208	99.52%	100.00%	99.52%	100.00%	97.59%
HAL/A332	1320	99.62%	99.92%	99.70%	99.92%	97.50%	1340	99.78%	100.00%	99.93%	100.00%	98.05%
JST/A21N	-	-	-	-	-	-	622	99.20%	100.00%	99.52%	100.00%	96.46%
JST/A332	234	98.72%	100.00%	98.72%	100.00%	96.17%	180	100.00%	100.00%	100.00%	100.00%	98.33%
KAL/A332	110	100.00%	100.00%	100.00%	100.00%	97.27%	428	99.53%	100.00%	99.53%	100.00%	93.22%
KAL/B772	271	99.26%	100.00%	99.26%	100.00%	96.67%	-	-	-	-	-	-
KAL/B77W	263	99.24%	99.23%	99.62%	99.23%	96.95%	306	100.00%	100.00%	100.00%	100.00%	98.69%
KIW/B752	113	100.00%	100.00%	100.00%	100.00%	98.23%	174	98.28%	99.42%	99.42%	100.00%	97.70%
KIW/C130	116	99.14%	100.00%	99.14%	100.00%	95.68%	204	98.53%	99.50%	99.01%	99.50%	97.54%

REQUIRED SURVEILLANCE PERFORMANCE						
Region	{FIT Name}					
Performance Criteria	RSP180					
Time Period	YYYY January-June			YYYY July-December		
<div> <div>Colour Key</div> <div> <div>Meets Criteria</div> <div>99.0%-99.89%</div> <div>Under Criteria</div> </div> </div>	No. Messages	Criteria		No. Messages	Criteria	
		95%	99.90%		95%	99.90%
		% < = 90sec	% < = 180sec		% < = 90sec	% < = 180sec
<b>Aggregate All RGS</b>						
{FIR name}						

REQUIRED COMMUNICATIONS PERFORMANCE										
Region	ISPACG									
Performance Criteria	RCP240									
Time Period	YYYY January-June					YYYY July - December				
<div> <div>Colour Key</div> <div> <div>Meets Criteria</div> <div>99.0%-99.89%</div> <div>Under Criteria</div> </div> </div>	No. Messages	ACP Criteria		ACTP Criteria		No. Messages	ACP Criteria		ACTP Criteria	
		95%	99.90%	95%	99.90%		95%	99.90%	95%	99.90%
		% <= 180sec	% <= 210sec	% <= 120sec	% <= 150sec		% <= 180sec	% <= 210sec	% <= 120sec	% <=150sec
<b>Aggregate All RGS</b>										
{FIR name}										

[illegible]

C-4



[illegible]

C-6