



International Civil Aviation Organization

The Forth Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/4) and the Twenty First Meeting of the South East Asian ATM Coordination Group (SEACG/21)

Hong Kong, 24th Feb – 28th Feb 2014

Agenda Item 4: Implementation of CNS/ATM Systems

KUALA LUMPUR FIR ADSC/CPDLC UPDATES

(Presented by Malaysia)

SUMMARY

This paper presents some updated information on ADS-C and CPDLC operational performance and RHS 50 application within the KL FIR Bay Of Bengal.

1. INTRODUCTION

1.1 An upgrade of the ATS system at the Kuala Lumpur ATCC was implemented in 2013 with main objective to enhance some of the ATS system features at the Kuala Lumpur ATCC to meets the rapid growth of air traffic movement in the region, promoting a better and efficient flow of air traffic management.

1.2 Among the upgrades included the integrating of the CPDLC/ADS-C system into the main system. This was in line with the earlier plan to use a single server for all system and to manage the human resources constraint which is still being faced at the KL ATCC.

1.3 The integration plan however was not fully successful as it had created some deficiencies which have lead to occurrences of split targets on controller radar displays. Due to its long standing issue, KL ATCC was directed to revert back to a standalone system, which during the upgrading had left some issues on the system. Operation then required more controller intervention and manual inputs to process all flights using ADS-C/CPDLC, besides experiencing glitches during connection request at work station. Mitigating the outstanding problems then became an issue as it will incurred additional cost as these were outside the contractual scope. By then CPDLC operation were conducted only on opportunity basis only rendering the application of RHS 50.

1.4 These issues were raised last November in Hyderabad during the BOBASIO/3 meeting. It was then decided that Malaysia will update the status of its system during the next SAIOCG meeting and the way to move forward if these deficiencies continues. It was also noted during the meeting that, a mechanism would be put in place to take advantage of Chennai's communication infrastructure at Chennai ACC, to assist Kuala Lumpur in RHS application should the issues within KL ATCC system be not resolved in time. This may include agreement on an early communication transfer to Chennai ACC before the agreed TOC on real time basis.

2. DISCUSSION

2.1 Finally the bugs were rectified and the ADS-C/CPDLC operation was back in operation last January, trials have been conducted and system was found to be stable with high rate of connectivity lately. We are still monitoring the situation and have conducted several RHS 50 implementations in early February 2014 on N571/L510. KL ACC will be performing a more robust RHS application on all established routes in the near future and appreciates support from the adjacent states and airlines to continue their effort in establishing more connectivity.

2.2 The installation of a High Range VHF on frequency 133.4 has helped us establish better communication with aircraft closer to the FIR boundaries; however its performance is still being monitored as we sometimes encounter fading in reception for flight operating at levels lower than FL 340. This serves as an option for a back-up, should the CPDLC fail during RHS application.

Training

2.3 Training and refresher courses for ATCO's will be conducted continuously to ensure sufficient, competent and raising confidence amongst ATC personnel to perform these operations, despite facing challenges in under taking the training now for the new runway at KLIA2 which is also in progress. KLIA2 is scheduled to be opened in May 2014 and it will involve major changes in the IFP procedures and airspace layout within the KL TMA.

Performance Rate

2.4 The uplink and downlink performance rates for delivery time recorded for January 2014 are accordance with target level. Please refer to **Appendix A**. Participation of airlines is as per **Appendix B**.

2.5 Malaysia will continue to collect problem reports and will send to CRA for analysis.

Support on 30NM Separation Implementation

2.6 With the current system stability, Malaysia is more confident in moving forward with other states to support RHS 30 on current RNP 10 routes.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Note the information detailed in this paper; and
- b) Discuss any relevant matters as appropriate.

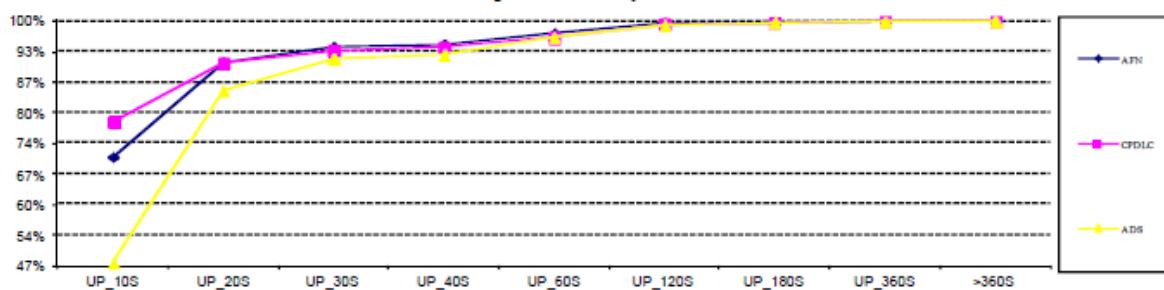
Appendix A

1. FANS Services Executive Summary for January 2014

1.4 FANS SERVICE PERFORMANCE (VHF+SAT)

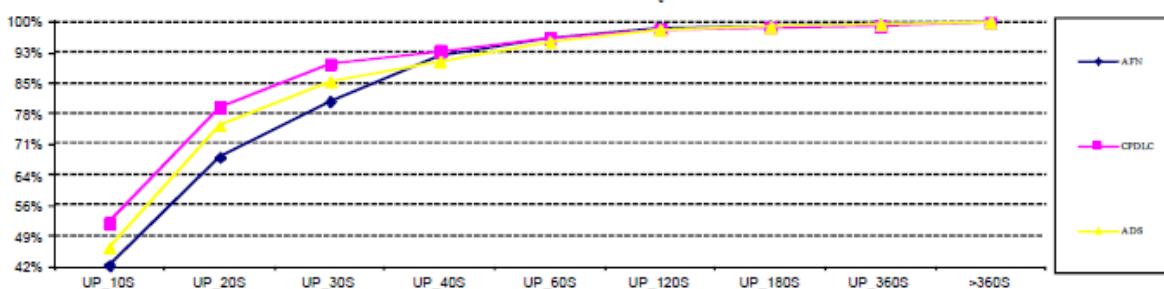
Uplink Message Delivery Time	10 s	20 s	30 s	40 s	60 s	120 s	180 s	360 s	>360 s
ATS Provider	58.93%	87.48%	92.75%	93.50%	96.62%	99.22%	99.81%	99.99%	100.00%
AFN (Log-on)	70.77%	91.09%	94.31%	95.05%	97.41%	99.62%	99.84%	100.00%	100.00%
CPDLC	78.25%	91.03%	93.65%	94.37%	96.44%	99.40%	99.76%	99.98%	100.00%
ADS	47.78%	85.01%	91.93%	92.69%	96.46%	99.04%	99.83%	99.99%	100.00%

FANS Uplink Delivery Time



Downlink Message Delivery Time	10 s	20 s	30 s	40 s	60 s	120 s	180 s	360 s	>360 s
ATS Provider	46.50%	75.11%	85.90%	91.05%	95.50%	98.36%	98.91%	99.41%	100.00%
AFN (Log-on)	42.03%	67.71%	81.11%	92.00%	96.45%	98.82%	99.13%	99.38%	100.00%
CPDLC	52.10%	79.78%	90.05%	93.19%	96.26%	98.36%	98.75%	99.12%	100.00%
ADS	46.19%	75.35%	85.87%	90.57%	95.25%	98.30%	98.90%	99.46%	100.00%

FANS Downlink Delivery Time



Appendix B

2.2 FANS TRAFFIC BY MEDIA AND AIRLINES

FANS BY MEDIA				FANS BY AIRLINES			
ATS Provider	Dec-13	12-month average	Percentage Total	ATS Provider	Dec-13	12-month average	Percentage Total
VHF UP & DOWNLINK	16,209	6,393	22.61%	SIA	22,409	7,086	31.26%
Satellite UP & DOWNLINK	28,082	8,099	39.17%	UAE	13,171	4,073	18.37%
Internetworking : Co-DSP	27,397	7,355	38.22%	MAS	8,132	2,567	11.34%
Total FANS Traffic	71,688	21,848	100.00%	QTR	7,666	2,006	10.69%
				ETD	4,480	990	6.25%
				KLM	2,313	965	3.23%
				THY	1,906	505	2.66%
				DLH	1,439	664	2.01%
				SAA	1,264	235	1.76%
				OTHERS	8,908	3,171	12.43%
				Total Airlines	71,688	21,848	100.00%