International Civil Aviation Organization

The Fifth Meeting of the Future Air Navigation Systems Interoperability Team-Asia (FIT-Asia/5)

Bangkok, Thailand, 05 – 06 May 2016

Agenda Item 3: Review of ADS/CPDLC Operations

PROGRESS ON IMPROVING PROBLEM REPORTING MECHANISM IN CHINA

(Presented by China)

SUMMARY

This paper presents the update in improving the problem reporting of CPDLC and ADS-C performance in China.

1. INTRODUCTION

1.1 Working Paper 7 of FIT-AISA/4 meeting presents proposed APANPIRG Air Navigation Service Deficiencies in the ATM field relating to Data Link Performance Monitoring and Analysis. In attachment A, a list of deficiency was raised agianst non-implementation of the provsions of Annex 11 Paragragh 2.27.5 when any FIT-Asia administration has implemented operational ADS-C/CPDLC services, in which China was raised the attention to not report data link problems to the CRA.

1.2 This paper presents some progress China made in improving problem reporting of CPDLC and ADS-C performance since then.

2. DISCUSSION

Background of CPDLC/ADS-C application in China

2.1 The L888 route opened in January, 10th, 2001. It is an air route across European and Asia in West-China. Its establishment reduces the length of air route across India, Middle-East and creates economical benefit. L888 route is an RNP 4 route under procedural control and apply CPDLC and ADS-C for commnunication and surveillance. The longitudinal separation along this route is 10 minutes. To open this route, CAAC/ATMB and related regional ATC units made great efforts in personnel training and equipment construction. It basically met the air traffic needs and resolved the problems that radar signals cannot be covered in some remote areas. However, it is the only CPDLC/ADS-C application in China.

Background of China’s attendance to the FIT-Asia meeting

2.2 China began to attend FIT-Asia meeting from 2012. According to the regional chart of APAC CRAs and FITs (Data-link), China should report to the FIT-Asia meeting, but there is not a designated CRA for the Chinese airspace. So after FIT-Asia/1 meeting, ATMB of CAAC established a small team to do the routine monitoring of CPDLC and ADS-C performance for the FIRs (Urumqi, Lanzhou, Chengdu nd Kunming FIR) along L888 route and provide reports to the interoperability team. For detail information of this team’s technical functions, please refer to working paper 3 of FIT-Asia/2 meeting.

2.3 From 2012 to 2014, this team reported the operational situation of L888 and also provided the FIT-Asia meeting results back to ATMB to promote the establishment of data link performance monitoring mechanism in China, but due to the limit use of CPDLC/ADS-C applications, it has been postponed. The team also registered to the ISPACG website for point of contact, and supported to provide feedback to some reported problems to FIT meetings through coordination with relevant parties in CAAC and the data analysis, but due to the lack of mechanism, it is difficult to raise the attention of operators and regional ATC units to the importance of PR and smooth the relevant workflow.

Actions taken No. 1: Investigation into the operational status of L888 route data link operation

2.4 In 2015, FIT-AISA/4 reported the list of deficiency for non-implementation of data link monitoring provisions of China concerning problem reporting issues and it was reviewed and reported by APANPIRG.

2.5 From 2015 to 2016, CNS and ATC division of ATMB made an investigation into the operational status of L888 route data link operation from the related ATC units. Based on the feedback, it is found that after years of operation, the communication and surveillance situation along this route have been much developed. Though there is still some VHF blind zones inside Lanzhou FIR (from LUVAR to SANLI), the radar and VHF coverage in most part of the route have been improved. Some FIRs are considering reducing the coverage of using ADS-C/CPDLC in their responsible area because voice contact and radar coverage can meet the CNS requirement. The regional ATC units also expressed that they once had some problems in their data link operations (for instance, unable to log on, etc.).

Actions taken No. 2: Update of the national POC for data link performance monitoring and provision of feedback to FIT-Asia meeting for the PRs on the ISPACG website

2.6 China Updated the point of contact on the ISPACG website, and will continuously track the L888 route related problem reporting.

2.7 For the open PRs on the ISPACG that require CAAC feedbacks since 2015, the technical team quried the local CPDLC/ADS-C database and provided possible answers to the problems based on the analysis of the related messages. Please refer to the IP that China provided to this FIT meeting.

Future work

2.8 China provides an action plan to address the establishment of data link problem reporting mechanism. Please refer to **Attachment A**. China will provide further progress to the future FIT-Asia meetings to promote relevant work.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper;

b) review **Appendix A** to see if there is any other necessary item to be added;

c) update the Air Navigation Service Deficiencies concerning China; and

d) discuss any relevant matters as appropriate.

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Attachment A: Action Plan To Address Problem Reporting of Data Link Performance Monitoring in China

Code	Task	Responsible Unit(s)	Tentative Time Frame	Status	Remarks
A1	To further investigate with relevant parties (ATMB (CNS & ATM division), related ATC units and technical team) to confirm the operational status of L888 route data link applications, and to see if there is any changes to the coverage of data link applications	ATMB (CNS & ATM division)	Before 31 July, 2016	Not started	
A2	Establish point of contact for all the related regional ATC units that have CPDLC/ADS-C operations	ATMB (CNS & ATM division)	Before 30 August, 2016	Not started	
A3	Draft a procedure for related ATC units to report PRs	ATMB (CNS & ATM division), techincal team	Before 31 September, 2016	Not started	
A4	Update the AIP/AIC to notify airspace users of the changes of data link application area in China	ATMB (CNS & ATM division)	Before 31 December, 2016	TBD	It will depend on the result of A1
A5	Coordinate with Flight Standard Department of CAAC for operations attention to the problem reporting mechanismof data link performance	ATMB (CNS & ATM division)	Before 31 October, 2016	Not started	
A6	Seek expertise concerning data link performance monitoring from CRAs	ATMB (CNS & ATM division), techincal team	TBD	Not started	