



International Civil Aviation Organization

Future Air Navigation Systems Interoperability Team-Asia (FIT-ASIA)

Bangkok, Thailand, 27 August 2012

### Agenda Item 3: Review of ADS/CPDLC Operations

#### HO CHI MINH FIR ADS/CPDLC OPERATIONAL IMPLEMENTATION

(Presented by Vietnam)

##### SUMMARY

This paper presents the status of ADS/CPDLC operations within the Ho Chi Minh FIR.

This paper relates to –

##### Strategic Objectives:

A: *Safety – Enhance global civil aviation safety*

C: *Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

##### Global Plan Initiatives:

GPI-9 Situational awareness

GPI-17 Data link applications

GPI-21 Navigation systems

## 1. INTRODUCTION

1.1 Viet Nam has officially started providing data link services on 08 ATS/RNAV routes L625, L628, L642, M765, M768, M771, N500 and N892 in the oceanic area of the Ho Chi Minh FIR since April 10 2008.

1.2 ADS/CPDLC services are available 24/24hours per day and conducted with appropriate FAN1/A equipped aircraft of all airlines. The detailed procedures for operations have been developed basing on the Global Operational Data Link Document (GOLD).

## 2. OPERATION STATUS

2.1 The status of ADS/CPDLC operations:

- Based on the daily records, there are about 390 flights overflying the above ATS routes (60% having ADS/CPDLC capability).
- There are about 80 aircraft having ADS/CPDLC connection with Ho Chi Minh system because of the fact that 95% of our airspace covered by VHF voice, the aircraft prefer using voice to data link

- 2.2 Technical status:
- Ground system: There is no modification to ground system, and the system is working satisfactorily.
  - ACARs link: With dual link provided by ARINC, there is no unplanned interruption and the connection between our system and service provider's server is stable.
  - Data link transfers between Ho Chi Minh ACC and Singapore ACC have been taking place smoothly.
- 2.3 CPDLC Uplink/Downlink messages: Based on our statistic, we noted as follows:
- CPDLC Up link Performance is met the GOLD criteria.
  - Downlink messages: 95 Percentile having duration of 00:56 minutes and 99 Percentile having duration of 01:37 minutes.
  - Uplink messages: 95 Percentile having duration of 01:07 minute and 99 Percentile having duration of 02:17 minutes.
  - Normal response time (from the moment of sending uplink message until the moment of receiving a single WILCO response):
    - + 15-19 seconds = 25 %
    - + 20-25 seconds = 60%, and
    - + 25-30 seconds = 15%
  - Success rate: 99 percent.
- 2.4 Data link transfers between Ho Chi Minh and Singapore ACCs have been taking place smoothly and success rate is more than 90.2%.
- 2.5 Problem Reports: There was no problem report being received and forwarded to CRA.
- 2.6 Periodic Status Reports: CRA-Japan service provision has been suspended for Southeast Asia since 2011. There is no recommendation for any correction received from CRA.

#### Further Improvement

- 2.7 Further cooperation amongst ICAO, IATA, Vietnam, Singapore, Japan, the Philippines and others concerned States should be enhanced in supporting the implementation of ADS/CPDLC in the area.
- 2.8 Future actions of improvement would be required as follows:
- Maintenance of stable operation of data link.
  - Improvement of quality of data link.
  - Reduction of Uplink time and Downlink time in order to allow the improvement on ADS/CPDLC separation application.
  - Continued and enhanced CRA service provision in the area to support ADS/CPDLC operations.
  - Expansion of ADS/CPDLC operation into other FIRs in our area.

### **3. ACTION BY THE MEETING**

- 4.1 The meeting is invited to note the information contained in this paper.

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