



International Civil Aviation Organization

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

Bangkok, Thailand, 27 August 2012

Agenda Item 2: Central Reporting Agency Reports

JAPAN CRA DATA-LINK PERFORMANCE ASSESSMENT

(Presented by Japan)

SUMMARY

This paper presents information on data-link performance monitoring within the Fukuoka Flight Information region (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-17 Data link applications

GPI-21 Navigation systems

GPI-22 Communication infrastructure

1. INTRODUCTION

1.1 The Japan Central Reporting Agency (CRA) has analysed data-link performance, which was important, as data-link was the basis for reduced separation minima.

2. DISCUSSION

2.1 **Table 1** shows the result of CPDLC downlink performance and **Table 2** shows the result of CPDLC uplink performance observed by Japan CRA between September 2011 and February 2012. Average success rate during the observation period is 99.13%.

Downlink: 95 %(99%) of whole messages were completed within 1min. (3min.)
Uplink: 95 %(99%) of whole messages were completed within 2min. (6min.)

	Sep.2011	Oct.2011	Nov.2011	Dec.2011	Jan.2012	Feb.2012
No. of message	45,344	43,429	35,418	31,517	32,678	31,165
Mean	0:00:15	0:00:16	0:00:16	0:00:17	0:00:18	0:00:16
Maximum	2:13:41	5:13:10	1:02:18	3:35:36	6:30:31	1:06:37
Minimum	0:00:01	0:00:01	0:00:01	0:00:01	0:00:01	0:00:01
95Percentile	0:00:30	0:00:30	0:00:30	0:00:35	0:00:35	0:00:35
99Percentile	0:01:25	0:01:30	0:01:30	0:01:50	0:01:45	0:01:40

Table 1: CPDLC Downlink performance from September 2011 to February 2012

	Sep.2011	Oct.2011	Nov.2011	Dec.2011	Jan.2012	Feb.2012
No. of message	36,039	34,803	29,953	27,707	28,811	27,106
Mean	0:00:10	0:00:10	0:00:11	0:00:11	0:00:11	0:00:10
Maximum	0:04:36	0:05:05	0:05:55	0:05:15	0:05:59	0:06:50
Minimum	0:00:01	0:00:01	0:00:01	0:00:01	0:00:01	0:00:01
95Percentile	0:00:25	0:00:25	0:00:25	0:00:30	0:00:25	0:00:25
99Percentile	0:01:15	0:01:15	0:01:15	0:01:20	0:01:25	0:01:20

Table 2: CPDLC Uplink performance from September 2011 to February 2012

2.1 **Table 3** shows the result of ADS report performance. ADS reports: 95 %(99%) of whole messages were completed within 1min. (3min.)

	Sep.2011	Oct.2011	Nov.2011	Dec.2011	Jan.2012	Feb.2012
No. of message	203,629	198,529	183,255	171,812	178,636	168,395
Mean	0:00:18	0:00:17	0:00:17	0:00:18	0:00:18	0:00:17
Maximum	0:59:08	0:58:23	0:58:17	0:58:34	0:59:31	0:58:09
Minimum	0:00:01	0:00:01	0:00:01	0:00:01	0:00:01	0:00:01
95Percentile	0:00:40	0:00:40	0:00:45	0:00:45	0:00:45	0:00:45
99Percentile	0:01:55	0:02:00	0:02:00	0:02:15	0:02:20	0:02:00

Table 3: ADS report performance from September, 2011 to February, 2012

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

.....