



*International Civil Aviation Organization*

**The Twelfth Meeting of the FANS Implementation Team, Bay of Bengal (FIT-BOB/12) and the Second Meeting of the Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF/2)**

Bangkok, Thailand, 22 – 26 February 2010

**Agenda Item 4: Review Bay of Bengal ADS/CPDLC Operations**

**PROGRESS REPORT OF ADS-C/CPDLC TRIAL OPERATION  
IN THE UJUNG PANDANG FIR**

(Presented by Indonesia)

**Summary**

This working paper describes the progress of ADS-C/CPDLC trial operation in the Ujung Pandang FIR and the next planning for full operation.

**1. Background**

1.1. Most area of eastern Indonesia is classified as oceanic area which it has limited capability in radar surveillance and VHF-voice communication/DCPC

1.2. In order to improve surveillance and communication capability over the area as well as ATS harmonization for the international flight operations with Brisbane FIR, the Makassar Air Traffic Services Center has been conducted the ADS-C/CPDL Trial MATSC.

**2. Progress of ADS-C/CPDLC trial operation**

2.1. Since the trial operation of ADS-C/CPDLC was effected on particular ATS routes A461, B462, B472, B473, B583, B584 and R340/R590, international flights operating on these routes shall use CPDLC for main communication and VHF voice communication as back up.

2.2. At the first year of the trial, some problems were recognized such as:

- Uplink and downlink failure due to ATC system;
- Uplink and downlink failure caused by the network connection failure;
- AIDC ;
- Operational sides weaknesses which the ATC system of Ujung Pandang can not send EOS (end of service) automatically due to limitation of ATC system. This makes ATC workload.

2.3. Due the problems occurred, the MATSC took consideration to continue AIDC trial and since August 2009 on the 25th meeting of AUSINDO (annually meeting between Indonesia and ASA Australia), ADS-C/CPDLC problems had been evaluated and some action had been taken and solved the problems.

2.4. Others consideration by the MATSC are in order to serve the ADS-C/CPDLC such as:

- Sistem support by the new version of Eurocat x ver. 3.16;
- Network connection provided by SITA is ready;
- ATC SOP in in due course siconizing with the upgraded system;
- TOC and AOC betwen Ujung Pandang ACC and Brisbane ACC is being continue in trial operations under new LOA.
- The automatic EOS can be done and ADS-C/CPDLC is running well.
- The most of international flight ADS/CPDLC log on but the others still maintain on VHF voice communication with Ujung Pandang ACC (see attachment traffic sample data of CPDLC connection on 6 February 2010 in Ujung Pandang FIR).

### **3. Operational Planning for the next after 7 April 2010**

3.1. ADS-C/CPDLC trial operations for all international routes within the Ujung Pandang FIR with effect date 7 April until 6 May 2010.

3.2. ADS-C/CPDLC full operation and implementation of 50 NM longitudinal separation based on ADS-C will be started on 6 May 2010 (ref. Indonesia AIP Supplement No. 01/10 dated 14 January 2010, Ujung Pandang Upper Control East & West Sectors have implemented 10 NM radar separation within radar coverage).

3.3. VHF voice as main air to ground communication whilst CPDLC as the back up.

### **4. Action plan to support point 4**

- 4.1. Finishing ATC SOP
- 4.2. Refreshment training for ATC
- 4.3. Updating inter-ACC LOA
- 4.4. Publishing AIP Supplement

### **5. Action by the meeting**

5.1 The meeting is invited to take a note this paper and provide feedback to support the successful of ADS/CPDLC implementation in Ujung Pandang FIR.

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Attachment :

**TRAFFIC SAMPLE DATA OF CPDLC CONECTION ON 6 FEBRUARY  
2010  
IN UJUNG PANDANG FIR**

NO	ACID	ROUTE	TIME LOG ON (UTC)	TIME LOG OUT (UTC)
1	CPA110	R340/A461	1:58:34	4:06:01
2	CPA134	A461	2:07:38	4:15:30
3	SIA220	A576	2:39:11	4:12:33
4	SIA245	A576	3:32:36	5:02:09
5	CAL055	B473	3:35:58	5:53:03
6	CPA139	A461/R340	3:38:33	5:44:08
7	THA456	B583	3:26:37	5:55:59
8	SIA256	A576	4:05:29	6:00:39
9	CPA110	R340/A461	2:19:22	4:08:59
10	EVA316	B473	4:12:12	6:32:49
11	QFA88	B473	4:25:46	6:38:34
12	CPA162	R340/A461	4:29:36	6:39:31
13	CES738	A461	4:30:44	6:39:05
14	CES562	R340/A461	4:33:44	6:46:54
15	QFA30	R590/A461	4:40:40	6:28:05
16	QFA97	R340/A461	4:40:45	5:00:30
17	QFA129	R340/A461	4:42:07	6:47:24
18	CPA785	B584	4:49:06	6:32:09
19	THA451	G464	4:56:11	5:10:53
20	EVA255	B584	5:05:45	7:03:13
21	CPA163	A461	5:06:37	6:13:23
22	CSN326	R340/A461	5:34:08	4:30:06
23	SIA238	A576	5:10:01	6:45:12

NO	ACID	ROUTE	TIME LOG ON (UTC)	TIME LOG OUT (UTC)
49	CPA171	B584/G578	10:04:57	12:02:28
50	SIA222	A576	10:19:36	11:30:15
51	QFA1	B583	11:08:14	11:30:14
52	SIA228	A576	11:35:17	12:56:52
53	QFA81	A576	12:00:39	12:44:03
54	QFA31	A576	11:45:32	11:51:06
55	QFA81	A576	12:16:12	12:44:03
56	UAE405	A576	12:17:20	13:28:54
57	QFA5	A576	12:44:03	14:34:47
58	JST35	A576	12:53:14	13:31:12
59	QFA2	A576	13:12:04	15:01:37
60	FDX77	R340/A461	13:12:57	15:31:26
61	CPA111	A461/R340	13:43:04	15:55:28
62	CCA174	R340/A461	13:49:22	16:05:16
63	VIR200	B473	14:00:18	16:26:50
64	QFA52	A576	14:13:45	15:56:09
65	SIA235	A576	14:34:47	15:59:14
66	UAE435	G462	14:40:38	16:31:51
67	ETD455	G462	15:05:30	15:28:26
68	QFA128	B473	15:05:30	17:17:14
69	JST36	A576	15:13:56	15:50:12
70	MAS131	A576	15:20:27	16:34:09
71	HVN783	B583	16:07:36	18:18:20

24	SIA298	A576	5:55:56	7:38:24
25	ETD473	A464	6:18:19	9:06:01
26	CPA102	B473	6:45:20	9:04:11
27	SIA268	A576	6:37:40	8:27:42
28	SIA232	A576	6:54:00	8:29:12
29	HVN780	B583	6:25:25	6:26:09
30	SIA232	A576	6:54:00	8:49:54
31	CAL052	R340/R590	7:08:14	9:09:16
32	QFA127	R340/A461	5:38:17	7:19:06
33	CPA108	B462	7:26:24	9:06:09
34	SQC7293	A576	7:33:00	9:04:58
35	GIA725	R592	7:33:00	10:22:17
36	SIA286	A464	7:36:07	9:09:34
37	MAS130	A464	7:43:16	10:09:31
38	QFA51	A576	8:00:17	9:50:25
39	CPA104	A461	8:31:14	10:39:52
40	CPA100	R340/A461	8:31:45	11:00:20
41	QFA9	A576	8:44:40	12:44:51
42	MAS138	A576	8:47:52	10:22:48
43	MAS148	A576	8:51:39	10:39:37
44	THA458	B583	8:51:39	10:22:21
45	CPA784	B584	9:02:34	10:29:42
46	SIA236	A576	9:03:08	11:22:18
47	THA466	A576	9:09:07	11:11:22
48	MAS122	A576	9:36:01	11:30:14

72	SQC7295	A464	16:07:36	18:38:14
73	HVN783	B583	16:07:36	18:38:14
74	KAL629	G578	16:08:01	18:12:43
75	ANZ39	B462	16:23:13	18:28:40
76	SQC7295	A464	16:23:13	19:08:55
77	UAE413	G462	16:29:17	18:12:43
78	CSN322	A461	16:29:53	18:30:55
79	CPA161	A461/R340	16:30:13	18:24:08
80	HVN781	B583	16:36:58	19:09:04
81	CPA168	A461	16:38:39	19:56:11
82	THA462	B583	17:06:12	19:48:55
83	MAS140	A464	17:22:03	19:48:11
84	CPA168	A461	17:49:14	19:48:09
85	QFA98	B473	17:49:14	20:16:05
86	QFA9	A576	17:53:16	20:16:05
87	CAL053	B473	17:53:16	21:01:08
88	THA452	B583	18:03:59	20:33:10
89	CAL053	B473	18:06:25	21:01:59
90	MAS146	A576/G462	18:33:47	18:38:14
91	SIA282	A464	18:44:29	21:09:09
92	CPA101	A461/R340	18:44:24	20:55:31
93	SIA231	A576	18:54:12	19:31:35
94	CPA170	R592/B584	19:09:04	21:08:41
95	CPA105	A461	19:31:35	20:30:51
96	UAE433	A464	21:01:08	23:06:02

Source : CPDLC traces file from Eurocat-X at Makassar ATS Centre