



International Civil Aviation Organization

**The Twelfth Meeting of the South East Asia ATS Coordination Group
(SEACG/12)**

Bangkok, Thailand, 3 – 6 May 2005

Agenda Item 3: Review current operations across South-East Asia and identify problem areas

**SUMMARY OF THE COMBINED MEETINGS OF THE
FIFTH FANS IMPLEMENTATION TEAM – BAY OF BENGAL (FIT-BOB/5),
THE SECOND FANS IMPLEMENTATION TEAM – SOUTH EAST ASIA (FIT-SEA/2),
THE FIRST AIR TRAFFIC FLOW MANAGEMENT TASK FORCE (ATFM/TF/1)
AND ADS/CPDLC SEMINAR**

(Presented by the Secretariat)

SUMMARY

This paper presents a broad summary of the Combined Meetings of the Fifth FANS Implementation Team – Bay of Bengal (FIT-BOB/5), the Second FANS Implementation Team – South-East Asia (FIT-SEA/2), the First Air Traffic Flow Management Task Force (ATFM/TF/1) and ADS/CPDLC Seminar.

1 INTRODUCTION

1.1 The Combined Meetings of the Fifth FANS Implementation Team – Bay of Bengal (FIT-BOB/5), the Second FANS Implementation Team – South East Asia (FIT-SEA/2), the First Air Traffic Flow Management Task Force (ATFM/TF/1) and an ADS/CPDLC Seminar were held at the Kotaite Wing, ICAO Asia and Pacific Regional Office, Bangkok, Thailand between 18 to 22 April 2005.

1.2 The Regional Office had scheduled the combined FIT-BOB and FIT-SEA meetings and ADS/CPDLC seminar in order to maximize the effective use of resources, noting that the material in the seminar and the FIT-BOB activities in relation to the conduct of the ADS/CPDLC Operation Trial in the Bay of Bengal which had commenced in January 2004 would be of assistance to the developments being undertaken by the FIT-SEA.

1.3 The First Meeting of the Air Traffic Flow Management Task Force was also scheduled concurrently with the combined FIT meeting, in recognition that the traffic flow management issues in the Bay of Bengal had been part of the FIT-BOB agenda for a considerable time and that the discussions in regard to automated flow management tools and techniques would also be of interest to FIT-SEA members.

2 DISCUSSION

ADS/CPDLC Seminar

2.1 The 4th meeting of the FIT-BOB (held in conjunction with BBACG/15 in September 2004) considered that an ADS/CPDLC seminar would be an effective way to educate ATS providers and operators in the region about ADS/CPDLC operations. In planning the seminar, the Regional Office considered that the members of the FIT-SEA could also benefit from the conduct of a seminar and scheduled the seminar accordingly, in conjunction with a combined FIT-BOB and FIT-SEA meetings.

2.2 The seminar was conducted over two days (18th and 19th April) and was attended by 42 participants from Australia, Bangladesh, Hong Kong China, India, Indonesia, Japan, Lao PDR, Malaysia, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United States, IATA, IFALPA and SITA. A CD-ROM of the seminar was produced and distributed to all participants. Details of the seminar presentations have been included as **Appendix A** to this paper.

Combined FIT-SEA and FIT-BOB Meetings (FIT-SEA/2 & FIT-BOB/5)

Review FANS-1/A Operations Manual (FOM)

2.3 The combined FIT meeting reviewed the status of the FANS-1/A Operations Manual (FOM), noting that APANPIRG/15 under Conclusion 15/7 had authorised the use of the FOM as the basis for regional ADS/CPDLC operations, in conjunction with the relevant ICAO provisions.

2.4 The meeting was advised that, in considering the need for harmonized global FANS 1/A operating procedures, ICAO Headquarters had supported proposals raised during the North Atlantic FANS Interoperability Group Eleventh meeting (NAT-FIG/11, October 2004). NAT-FIG/11 had agreed that amalgamation of the Pacific FANS 1/A Operations Manual (FOM) and the NAT Guidance Material was a desirable goal. The NAT-FIG/11 considered that a jointly drafted FANS document, incorporating the existing FOM and NAT documents, could identify elements of FANS operations that are common across all participating regions, while providing unambiguous guidance for operators in areas that were the subject of confusion.

2.5 The Asia and Pacific Regional Office in Bangkok supported the proposal and work has commenced under the auspices of the ICAO EUR/NAT Office in order to produce a joint document. It is expected that an initial draft document will be circulated for preliminary comment during the 3rd quarter 2005.

Update of Bay of Bengal ADS/CPDLC Operational Trial

2.6 India reported that the ADS/CPDLC Operational Trial was proceeding positively, with confidence increasing amongst pilots and controllers. The ground system, which will receive software update modifications shortly, has already reached a level of stability where failures are now very infrequent. Unfortunately, although the system has capacity to accommodate additional traffic, the number of participating airlines has not increased significantly. India is planning to introduce further ADS/CPDLC trial operations in the Mumbai and Delhi FIRs, commencing in late 2005 or early 2006.

2.7 Although the trial is proceeding well, India reported that they are not yet ready to consider the introduction of reduced separation provisions. India considered that a simultaneous coordinated implementation of reduced separation applications by all participating ATS service providers in the Bay of Bengal was likely to be the best implementation strategy. The Secretariat supported this position.

2.8 Sri Lanka advised the meeting that although they had installed ADS/CPDLC equipment in early 2001 and commenced trial operations on 15 June 2001 within Colombo FIR, reduced staffing situations had led to restrictions in the use of the equipment. Currently, the system is not operational due to an equipment malfunction which is expected to be fully restored by mid May 2005 when the operational trial would be reactivated.

Update of FIT-SEA

2.9 The combined FIT meeting reviewed the FIT-SEA Work Plan and recognized that the Work Plan contained minimal detail and had not been developed sufficiently for an implementation project. Accordingly, the meeting requested the Secretariat to adopt the FIT-BOB model. IFALPA requested that more attention should be given to timelines and target dates for completing the various tasks. A revised Work Plan format would be prepared for the next meeting and States were requested to provide target dates for introducing ADS and CPDLC services.

2.10 The meeting noted that the two principal ATS providers for the non-radar airspace over the South China Sea where ADS/CPDLC was needed were the Philippines and Viet Nam. As Viet Nam was not present at the meeting, no update of the situation in Viet Nam was available. The Philippines advised that there had been unavoidable delays in obtaining ADS and CDPLC equipment and the implementation date had slipped from 2007, as notified at the last meeting, to 2010. The meeting expressed considerable disappointment in this development which would have an adverse impact on improving the air traffic services over the South China Sea.

2.11 The Regional Office is planning to conduct a Special Implementation Project (SIP) to the Philippines in July 2005 and the meeting requested that the SIP Officer bring to the attention of the Philippine authorities the need to expedite equipage and implementation of ADS and CPDLC in the interests of safety in the South China Sea airspace.

2.12 The Secretariat suggested that there needed to be a renewed effort on the part of States and ICAO to address the timely implementation of the regional CNS/ATM plan and give suitable priority to providing the data link services. The meeting agreed that the Regional Office should bring this to the attention of States, and in view of the growth in traffic in the region and the safety and environmental concerns being expressed, to request that they give priority to funding the necessary ATM improvements.

Establishment of the CRA for the South-East Asia area

2.13 Japan informed the meeting that in follow-up to FIT-SEA/1 (May 2004) CRA Japan has confirmed that it would be willing to provide the CRA services for the FIT-SEA and requested the meeting to consider this offer. The provision of CRA services would be an extension of the existing CRA Japan activities in the Tokyo FIR as aircraft were operating from the Tokyo FIR to the South-East Asia area. This would also provide continuous CRA services across this geographical area.

2.14 The meeting recalled that FIT-SEA/1 had sought clarification of the respective roles of the CRA of Japan and its relationship with Boeing, with a view to fully understanding whether the South China Sea CRA activities would be undertaken exclusively by the CRA Japan or whether Boeing would have a role and if so, the extent of that role. CRA Japan advised that as part of their

activities for the Tokyo FIR, they were working closely with Boeing, as the operating body of the CRA for FAA, on the technical issues concerning problem reports affecting Boeing aircraft.

2.15 CRA Japan advised that initially there would be no charge for setting up and operating the CRA, but consideration would need to be given for funding its ongoing service, and this matter should be taken into account in the CRA funding discussions in due course.

2.16 The meeting noted that it was the intent of CRA Japan to undertake the role of FIT-SEA CRA until the FIT-SEA established a formal CRA. The Philippines, Singapore, IATA and IFALPA thanked CRA Japan for their offer to set up the CRA and the preparation work that they had done, and supported the proposal. The Secretariat also expressed its appreciation and endorsed CRA Japan's proposal. As Viet Nam and Indonesia were also involved but were not present, the Regional Office would coordinate with them to seek their views and would advise all parties concerned.

2.17 In regard to the formalities to establish the CRA, the Secretariat advised that this was a matter for the States concerned to decide as they were responsible for the provision of the CRA services. In this case, as CRA Japan was an established CRA, the States could all agree through the FIT-SEA to appoint CRA Japan. The Secretariat also advised that acceptance of the offer of FIT-SEA CRA services by the CRA Japan would not require a formal approval of APANPIRG. However, it would be necessary to obtain the cooperation of the aircraft manufacturers and data link service providers and in this regard the Secretariat was requested to confirm their participation at future FIT-SEA meetings.

2.18 CRA Japan advised that the objectives of the FIT-SEA CRA were to assist the FIT-SEA members in planning and implementing ADS/CPDLC systems by sharing the technical and operational information, processing FANS 1/A Problem Reports (PR), disseminating the de-identified problem report information, and submitting reports to the FIT-SEA and relevant bodies.

2.19 CRA Japan advised that at the next FIT-SEA meeting it would be necessary to confirm the role of the CRA, clarify who were the FIT-SEA members and their roles, and put in place the procedures and process for operating the CRA. The Secretariat suggested that if possible, the preparation by CRA Japan of these documents prior to the RASMAG/3 meeting in June 2005 would permit RASMAG to review and provide feedback in regard to the proposals. In the meantime, the CRA Japan advised that they were willing to start work with Singapore on any problem reports that they had experienced as they were the only State presently operating ADS and CPDLC services in the area. Singapore agreed to provide these reports to the CRA Japan.

Establishment of the CRA for the Bay of Bengal Airspace

2.20 IATA was pleased to advise the meeting that they were at the final stage of reaching agreement with Boeing for the provision of CRA services in the Bay of Bengal and expected that a contract would be signed by the end of this month. IATA provided details of the contract with Boeing and how the funding mechanism would work. The contract would be effective for 18 months. IATA would be a principal contracting partner with Boeing, and as such would be responsible for meeting the cost incurred by Boeing for operating the CRA in accordance with the defined requirements. Boeing would be paid in arrears and it should be possible to commence CRA services as soon as the contract was signed. All users of the data link services would be required to pay for the CRA services and a single charge would be levied on airlines by IATA in accordance with agreements with the States concerned. States would not bear any expense in this process and would not be required to participate in the invoicing and collection of charges other than providing the data and publishing their AIP Supplements (SUP).

2.21 However, to bring the CRA into operation, it would be necessary for IATA also to enter into a formal arrangement with the States concerned to ensure provision of the necessary data

and to enable IATA to collect charges from the users of the data link services. This would require States to notify users that charges would be levied for the provision of ADS and CPDLC and that IATA was authorized by the States concerned to invoice and collect charges specifically for the operation of the CRA. In regard to the notification to be issued by States on user charges and operation of the CRA, IATA would provide an example of wording that could be used in an AIP SUP and coordinate with the States concerned to complete the arrangements. In order to progress these matters, the meeting agreed that a SCM for CRA Funding should be held on 2 - 3 June 2005.

Draft Guidance Material for End-to-End Safety and Performance Monitoring

2.22 The meeting was presented with a draft copy of the *Guidance Material for End-to-End Safety and Performance Monitoring of Air Traffic Service (ATS) Data Link Systems in the Asia/Pacific Region* for review. The guidance material was intended to provide a set of working principles for ATS data link system performance monitoring that would be applied by all States implementing these systems, as well as providing detailed guidance on the requirements for establishing and operating a FANS-1/A Implementation Team (FIT) and Central Reporting Agency (CRA). It was intended that this guidance material would help promote a standardized approach for monitoring the performance of ATS data link systems within the Region.

2.23 States and International Organizations are requested to submit comments and recommendations to the Regional Office prior to 27 May 2005 in order that they may be incorporated into material to be presented to RASMAG/3 during June 2005. RASMAG/3 will review the material with a view to submitting the material to APANPIRG/16 in August 2005 for endorsement as regional guidance material.

Combined Meetings of FIT-BOB and FIT-SEA

2.24 The meeting considered the potential benefits of continuing to hold combined meetings of the FIT-BOB and FIT-SEA, agreeing that each such occasion should be considered in relation to the circumstances prevailing at the time rather than simply adopting the concept as a routine procedure.

2.25 In light of the imminent commencement of CRA services for the FIT-BOB and the proposed expansion, during late 2005/early 2006, of the Bay of Bengal ADS/CPDLC trial to include Delhi, Mumbai and Colombo FIRs, the meeting agreed that FIT-SEA members would benefit from participation at the next FIT-BOB meeting. Accordingly a combined FIT meeting would be scheduled by the Regional Office during November/December 2005, and final arrangements communicated to States at a later stage.

First Air Traffic Flow Management Task Force Meeting (ATFM/TF/1)

Establishment of the ATFM/TF

2.26 Recent meetings of APANPIRG, the BBACG and the RVSM/TF had all recognized a need to improve the overall management of traffic flows across the Bay of Bengal area. APANPIRG/15 (August 2004) had noted the considerable efforts being made by States to collaborate together with IATA to improve the ATFM over the Bay of Bengal area and encouraged all parties to continue their efforts and to take into account the benefits to be derived from ATM automated systems.

2.27 RVSM/TF/24 (November 2004) recommended that a special coordination meeting (SCM-BOB) should be convened to study the matter in greater detail, and consideration be given to conducting an operational trial to enable the States concerned to assess the effectiveness of any automated ATFM system selected and the corresponding ATFM plan.

2.28 The Special Coordination Meeting – Bay of Bengal (SCM-BOB) called for by RVSM/24 was held in conjunction with the BBACG/16 meeting during 31 January – 4 February 2004. The SCM-BOB agreed that a dedicated Air Traffic Flow Management Task Force (ATFM/TF) should be established under BBACG to plan and develop an ATFM service for the Bay of Bengal and South Asia.

2.29 The ATFM/TF/1 meeting adopted a ‘core team’ approach to the task force activities, as this had been very successful in other areas of the Regional Office programme. The meeting reviewed and confirmed the composition of the core team of the task force, including members from ICAO, India, Malaysia, Singapore, Thailand and IATA.

ATFM Phased Implementation

2.30 The SCM-BOB agreed that the first priority of the task force should be towards resolving the immediate problems encountered by westbound traffic operating across the Bay of Bengal to Europe during the night time period. The SCM-BOB drafted Terms of Reference (TOR) for the ATFM/TF that included the implementation of ATFM in this context by the third quarter of 2005:

2.31 In order to meet the objectives described in the TOR, the SCM-BOB adopted a phased implementation programme as per the following:

Phase One: Flights planning to transit the Kabul FIR

Phase Two: Other international flights crossing the Bay of Bengal and/or South and South East Asia areas

Phase Three: Future planning for increased traffic within the Bay of Bengal and South and South East Asia areas

Automated Flow Management Tools

2.32 As a result of the deliberations of the SCM-BOB and an informal ‘mini’ working group meeting of several South-East Asia ATFM/TF members and industry stakeholders held at the Singapore Aviation Academy on 14 and 15 March 2005, the Regional Office had invited the FAA to provide appropriate representation to the ATFM/TF/1 meeting in order to deliver a comprehensive technical, business and financial presentation in relation to the provision of a USA FAA Dynamic Ocean Track System Plus (DOTS+) application for the Bay of Bengal. In order to facilitate decision making by the States involved, the FAA was requested to address all aspects involved in potentially commissioning an operational trial of DOTS+ in the Bay of Bengal, effective AIRAC 29 September 2005, including any likely impediment to implementation. An FAA representative provided a comprehensive presentation to the meeting.

2.33 Thailand presented the meeting with updated details of an AEROTHAI proposal to develop and implement an Air Traffic Flow Management (ATFM) system in the Bay of Bengal and South Asia for aircraft transiting the Kabul FIR. Thailand provided the meeting with a Draft Concept of Operations document, which covered a number of important subjects which related to possible solutions for ATS users and providers, not only through the Kabul FIR but also to reduce bottlenecks as aircraft transited over the Bay of Bengal and the domestic airspace of India and Pakistan

2.34 As a result of the broad nature of the material that had been made available by AEROTHAI, the meeting had experienced difficulty in establishing a full understanding of the ATFM system tool and associated concepts that were being proposed by AEROTHAI. Accordingly, the Chairman expressed the view that there was insufficient detail presently before the ATFM Task Force to enable it to make a suitably informed decision on the merits of the AEROTHAI proposal, and as such the meeting was also unable to undertake a meaningful comparison between the AEROTHAI and FAA proposals.

2.35 Accordingly, the Chairman recommended to the meeting that the selection of an ATFM system tool be deferred until ATFM/TF/2 (scheduled June 2005), at which time the two systems would be evaluated by way of “Proof of Concept” demonstrations to the ATFM/TF/2 meeting.

3 ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information provided in respect of the FIT-SEA/2, FIT-BOB/5, ATFM/TF/1 meetings and the ADS/CPDLC Seminar, and
- b) identify and discuss issues arising from the report of the combined meetings and seminar.

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SUMMARY**ICAO ADS/CPDLC Seminar**

The seminar was held over two days (18th and 19th April 2005) at the Regional Office, Bangkok, Thailand and was attended by 42 participants from Australia, Bangladesh, Hong Kong China, India, Indonesia, Japan, Lao PDR, Malaysia, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United States, IATA, IFALPA and SITA. The seminar was divided up into four sessions over the two days, as follows:

Monday, 18th April 2005**Session 1:**

- a) What is ADS-C, What is CPDLC, What is Data Link
Mr. Craig Roberts, Airservices Australia
- b) IFALPA – Pilot Perspectives of ADS/CPDLC, including
Cockpit Practices and Procedures
Capt. Toby Gursansky, IFALPA Representative
- c) Data Network System Provision and Architecture
Mr. David Fung, SITA

Session 2:

- a) ADS/CPDLC Operations in the Australian Environment
Mr. Craig Roberts, Airservices Australia
- b) Recommended Process for Successful Deployment of
ADS/CPDLC Systems
Mr. Hiroshi Matsuda, ATCA Japan
- c) Requirements for ATC Systems with ADS/CPDLC –
Tokyo ODP System, including lessons learnt during the
course of development and operation.
Mr. Takashi Matsumoto, NEC
- d) ADS/CPDLC Operating Procedures & Documentation –
FANS Operations Manual (FOM), ICAO Provisions in
relation to data link services & ICAO Document
References for ADS/CPDLC
Mr. Andrew Tiede, ICAO Regional Officer, ATM

Tuesday, 19th April 2005**Session 3:**

- a) ADS/CPDLC Operation in the Tokyo FIR
Mr. Hiroshi Inoguchi, JCAB

- b) Roles and Functions of the FANS Interoperability/ Implementation Team (FIT), including Problem Reports and System Performance Analysis
Mr. Craig Roberts, Airservices Australia
- c) The structure, roles and activities of the FIT CRA of Japan
Mr. Yoshiro Nakatsuji, JCAB CRA
- d) Problem Reports and System Performance of Oceanic Datalink Operation, CRA Japan.
Ms. Hiromi Suzuki, CRA Japan
- e) Launch and Capabilities of the Japanese Multi Function Transport Satellite (MTSAT)
Mr. Hiroshi Inoguchi, JCAB

Session 4:

- a) Finance Arrangements – Mechanisms to facilitate collaborative funding of the CRA
Dr. Paul Hooper, ICAO Air Transport Regional Officer
- b) Status of Bay of Bengal ADS/CPDLC Operational Trial
Mr. M. Sarangapani, Airports Authority of India
- c) Use of integrated ADS/CPDLC capabilities in the FAA’s ATOP system
Mr. Kevin Chamness, FAA En Route & Oceanic Services, ATO

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