INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE

REPORT OF THE SPECIAL COORDINATION MEETING OF THE AIR TRAFFIC FLOW MANAGEMENT TASK FORCE IN RESPECT OF ESTABLISHING A PROJECT MANAGEMENT TEAM (SCM ATFM/TF PMT)

Singapore, 10 – 11 August 2005

The views expressed in this Report should be taken as those of the Meeting and not of the Organization

Approved by the Meeting
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1.1 **Introduction**

1.1.1 The Special Coordination Meeting of the Air Traffic Flow Management Task Force in respect of Establishing a Project Management Team (SCM ATFM/TF PMT) was held at the Singapore Aviation Academy, Singapore from 10 to 11 August 2005.

1.2 **Attendance**

1.2.1 The meeting was attended by 25 participants from Australia, India, Indonesia, Malaysia, Singapore, Thailand, United States, IATA, IFALPA and IFATCA. A complete list of participants is at **Appendix A** to this Report.

1.3 **Officers and Secretariat**

1.3.1 Mr. Ron Rigney, ATM International Liaison Manager for Airservices Australia, continued as the Chairman of the Air Traffic Flow Management Task Force. Mr. Andrew Tiede, Regional Officer ATM served as the Secretary of the meeting.

1.4 Opening of the Meeting

1.4.1 During his opening remarks, the Chairman Mr. Ron Rigney thanked the CAA of Singapore and the Singapore Aviation Academy for their warm and generous hospitality in hosting this important Special Coordination Meeting of the Air Traffic Flow Management Task Force.

1.4.2 In reflecting on the outcomes of ATFM/TF/2, Mr. Rigney reminded the meeting that a key priority should be the development of a basic ATFM system tool that would satisfy the requirements of Phase One of the previously agreed ATFM Phased Implementation program. The meeting was also reminded that the primary purpose of the ATFM/TF was the development of an ATFM system and that other issues which may arise during discussions should be referred to the BBACG where necessary.

1.4.3 Mr. Tiede welcomed participants to the meeting on behalf of the Regional Director of the ICAO Asia and Pacific Office, Mr. Lalit Shah, and thanked delegates for their prompt response in respect to the short notice that had been provided regarding the meeting. Mr. Tiede apologized for the non attendance by ICAO at the ATFM/TF/2 meeting in Delhi, India during late June, noting that an unfortunate clash of dates had occurred in respect of the Delhi meeting and the conduct of an ICAO safety oversight audit of Thailand under the Universal Safety Oversight Audit Programme (USOAP) of ICAO. A shortfall in regard to the availability of a qualified ATM auditor for the Thailand audit led to the deployment of Mr. Tiede on the Thailand audit, at the expense of the Regional Office programme.

1.4.4 In recognizing the critical importance of the work of the Task Force, and that the Task Force had a clearly defined direction and associated work programme and was under the guidance of a very capable Chairman, the Regional Office considered that the meeting in Delhi should proceed without the attendance of a dedicated ICAO official. Mr. Tiede considered that, in hindsight, this had been the correct choice as ATFM/TF/2 had made good progress towards the implementation of an ATFM operational trial.

1.5 **Documentation and Working Language**

1.5.1 The working language of the meeting as well as all documentation was in English.

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Agenda Item 1: Adoption of Agenda

1.1 The meeting reviewed the provisional agenda proposed by the Chairman and adopted it as the agenda for the meeting.

Agenda Item 1: Adoption of Agenda

Agenda Item 2: Review outcomes of ATFM/TF/2

Agenda Item 3: Establishment of a Project Management Team

Agenda Item 4: Development of operational requirements (ATFM Rules) for ATFM system

Agenda Item 5: Review Draft AIC and Draft AIP SUP documentation

Agenda Item 6: Flow Management Handbook

Agenda Item 7: Review and Update ATFM/TF Task List

Agenda Item 8: Any other business

Agenda Item 2: Review outcomes of ATFM/TF/2

2.1 The SCM ATFM/TF PMT meeting reviewed and finalized the draft report of the Second Meeting of the Air Traffic Flow Management Task Force (ATFM/TF/2), which had been hosted by the Airports Authority of India in New Delhi, India from 28 June to 1 July 2005. The meeting recalled that an ICAO official had been unable to attend the New Delhi meeting and this had regrettably led to some delays in finalizing the report of the meeting.

Thailand BOBCAT System

2.2 In reviewing the draft report of ATFM/TF/2, the meeting recalled that Thailand had presented an updated Concept of Operations for the Bay of Bengal Cooperative ATFM Advisory System (BOBCAT). In respect to the funding of BOBCAT, Thailand advised ATFM/TF/2 that it was their intention to absorb the initial development costs of the automated BOBCAT system. However, if the BOBCAT system was selected by States for implementation, cost-recovery funding arrangements may need to be considered for ongoing operations.

2.3 ATFM/TF/2 had been informed that BOBCAT was not intended to “control” aircraft nor take away any of the responsibilities of the ATS providers concerned. In accordance with Phase One of the ATFM system, the purpose of BOBCAT was to regulate the flow of air traffic departing airports from East Asia, Southeast Asia and South Asia which planned to transit the Kabul FIR between the hours of 1900UTC and 2359UTC. Additional to this requirement, the BOBCAT system was expected to take into account the present bottlenecks caused by merging routes over India by applying appropriate spacing between aircraft crossing intermediate gateway fixes enroute to Kabul FIR.

2.4 A demonstration of the BOBCAT system was presented to ATFM/TF/2, using several gateway points along major ATS routes through Bay of Bengal and Kabul FIR. For the purpose of the demonstration, only departures from Bangkok, Kuala Lumpur and Singapore were used. The longitudinal spacing parameter for routes over Bay of Bengal and Kabul FIR was assumed to be 10 minutes, while the parameter for routes over continental India was assumed to be 5 minutes. During the demonstration

approximately 10 slot requests were inputted into the system, the cut-off time was introduced followed by the system generating the slot allocation and sending the information to dispatchers.

Airservices Australia and the FAA DOTS+ System

2.5 ATFM/TF/2 was informed that Airservices Australia had recently acquired the FAA Dynamic Ocean Track System Plus (DOTS+) automated system under a technical assistance agreement with the FAA. The DOTS+ platform had been installed at the Melbourne Centre and was being used to generate daily Flex Tracks for the Australian Organized Track Structure (AUSOTS). Under AUSOTS, and within the Australian FIR, aircraft are permitted to operate on daily Flex Tracks between Singapore, Brisbane, Melbourne and Sydney.

2.6 ATFM/TF/2 was also informed that although the Melbourne DOTS+ platform was specifically acquired for Flex Track generation, it was also capable of serving as an automated ATFM system tool, using the "Track Advisory" functionality that currently resides within the DOTS+ core system.

2.7 Australia informed the ATFM/TF/2 meeting that the FAA was willing to work with Airservices Australia and others to provide a web-based automated ATFM system tool for deployment in the Bay of Bengal. However there were a number of arrangements that would need to be made, including the drafting of a suitable technical services agreement, approval by the FAA to use the Melbourne installation for applications in the Bay of Bengal as well as other operational and administrative matters for consideration within Airservices Australia. Consequently, it was unlikely that Airservices Australia could arrange an operational trial prior to the beginning of 2006.

The FAA DOTS+ System

2.8 The meeting recalled that the DOTS+ automated flow management system had been in operational use in the United States for more than 10 years. The system had been developed by the FAA, but could be owned and operated by a State ATS provider(s) or by IATA and its member airlines, and the software provided by the FAA under a licensing arrangement.

2.9 As the FAA was not represented at ATFM/TF/2, attention had been drawn to the two previous DOTS+ presentations that had been delivered by the FAA at the RVSM/TF/24 meeting (November 2004) and the ATFM/TF/1 meeting (April 2005). In both instances, the FAA had proposed that the web based "Online Track Advisory" function would be utilised in a DOTS+ ATFM system for the Bay of Bengal, however it was emphasised that the "Online Track Advisory" function existed in prototype only at this stage.

2.10 During the ATFM/TF/1 meeting, the FAA had provided a comprehensive technical, business and financial presentation in relation to a DOTS+ application for the Bay of Bengal. DOTS + could be readily adapted to provide flow management in the Bay of Bengal area, with an implementation time frame in the order of three months.

2.11 The FAA had highlighted the willingness of the FAA to work with the States of the Bay of Bengal in regard to improving the flow of traffic in the area, and advised that the FAA was ready to answer any questions and enter into further discussions at any time. In respect to funding of DOTS+, during ATFM/TF/1 both Singapore and India had offered, if DOTS+ was selected by the States concerned, that they expected to be able to assist with some of the establishment costs. Singapore would consider funding of up to half the set up costs and India informed that they would consider funding the entire set up costs.

AFTM Operational Trial for the Bay of Bengal and South Asia - BOBCAT

2.12 In light of the above, ATFM/TF/2 had considered available options for the conduct of an ATFM operational trial in accordance with Phase One of ATFM across the Bay of Bengal and South Asia. In this regard, ATFM/TF/2 noted Thailand's readiness to proceed to an operational trial and requested Thailand to continue to develop BOBCAT to the stage of an operational trial, in close cooperation with concerned States and IATA.

2.13 Thailand advised ATFM/TF/2 that their target date to be ready for this operational trial would be the end of 2005. Accordingly ATFM/TF/2 agreed to commence an operational trial of the BOBCAT system on AIRAC date 22 December. Arrangements for the operational trial would be confirmed during the ATFM/TF/3 meeting scheduled in September 2005, and the results of the trial would be analyzed by the ATFM/TF during, and on completion of the trial.

Outcomes of the Review of ATFM/TF/2

2.14 The FAA representative expressed regret for the absence of the FAA from the ATFM/TF/2 meeting, a situation which had arisen as a result of a clash of commitments whereby the DOTS+ staff were in Melbourne installing the DOTS+ equipment for Airservices Australia. The FAA representative reiterated their willingness to develop the DOTS+ system for application in the Bay of Bengal in collaboration with one or more States of the Region and invited participants to contact the FAA directly with questions in this regard.

2.15 Thailand, noting the agreement by ATFM TF/2 for Thailand to continue to develop the BOBCAT system to the stage of an operational trial, indicated that any assistance that the FAA could provide in the development of BOBCAT would be appreciated. FAA and Thailand agreed to coordinate "off-line" in this respect and update ATFM/TF/3 regarding the outcomes of these discussions.

Agenda Item 3: Establishment of a Project Management Team

3.1 ATFM/TF/2 acknowledged the significant work programme currently being undertaken by the ATFM/TF, but recognized that additional effort would be required in order to commence an operational trial of automated flow management systems during December 2005.

3.2 In considering the number of specialized tasks that would be required before the implementation of an operational trial, ATFM/TF/2 formed the view that these matters would be best progressed through the establishment of a dedicated ATFM Project Management Team, with associated work tasks aimed at implementing an operational trial as scheduled. It was further agreed that the Project Management Team would comprise members of the Core Team as well as designated Subject Matter Experts (SMEs).

3.3 Amongst other tasks, ATFM/TF/2 considered that the project management team would define the parameters to be applied in the ATFM system tool to facilitate the application of the required longitudinal spacing between aircraft operating at the same flight level transiting the Kabul FIR.

3.4 In discussing the nomenclature "Project Management Team", the meeting agreed with comments from the Secretariat that the name project management team had several potential connotations associated with resources and responsibilities for an ATFM "project" of some kind. These could include the circumstance where the project management team could be construed as a dedicated, full time, fully funded resource for the purposes of the ATFM operational trial.

3.5 The meeting agreed that this was not what was intended by ATFM/TF/2; instead the intention was to focus the activities of the core team (including subject matter experts) of the ATFM/TF on implementing an operational trial. The meeting considered that the terminology "Core Team" or "Core Team with Invited Specialists" was suitable in this context and agreed to abandon the use of the wording "Project Management Team". Members of the Core Team, as identified during ATFM/TF/1, were urged to work "off-line" towards implementing the operational trial in December 2005 and to provide update reporting to ATFM/TF/3 in September 2005.

3.6 In this regard, the meeting again regretted the absence of Pakistan, noting the important role that Pakistan played in feeding traffic into the Kabul FIR. The meeting urged the Secretariat to ensure that Pakistan was again invited to the next task force meeting, with a view to including Pakistan in the Core Team at that time.

Agenda Item 4: Development of operational requirements (ATFM Rules) for ATFM system

ATFM Phased Implementation

4.1 In considering the development of ATFM rules, the Secretariat drew the attention of the meeting to the work of the SCM-BOB (Jan/Feb 2005) which had defined objectives and terms of reference (TOR) for the ATFM/TF (**Appendix B** refers). 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

4.2 The meeting agreed that the work of the ATFM/TF should focus very clearly on addressing the Phase One issues only and that consideration of Phase 2 & 3 issues would be dealt with in due course. Accordingly, the meeting stressed the need to develop ATFM Rules and procedures that simply and clearly enabled the Phase One implementation only.

4.3 The Chairman emphasized that the ATFM tool should not integrate the traffic orientation scheme proposed towards the last phases of EMARSSH. The meeting recognized that any ATFM tool, including BOBCAT, was not an ATC separation tool. An ATFM tool serves to manage the flow of traffic to assist ATC units in smoothing traffic flows.

BOBCAT Paper Trial

4.4 The meeting agreed that the capabilities of BOBCAT should be demonstrated via a series of desktop or paper trial simulations, similar to the FAA DOTS+ paper trial that IATA had coordinated and conducted through the IATA Singapore office in 2003, using a sample of a typical one night's traffic. The meeting suggested, in respect of the limited time remaining prior to the commencement of the operational trial in December 2005 that Thailand should conduct these simulations prior to ATFM/TF/3, in order to provide the results of the trials to ATFM/TF/3.

4.5 Thailand advised that they would do their best to comply, but due to the short time available to implement the agreements on operating rules that had been reached during this meeting, they had some concerns in respect of what could be achieved in this timeframe.

4.6 The meeting was of the opinion that the BOBCAT paper trial should include a test of at least the following parameters:

a) Necessary Aircraft Spacing on departure and Enroute;
b) Procedures for missed wheels-up time;
c) Inclusion or exclusion of Non-Kabul-Bound Merging Traffic

Key Issues

4.7 Thailand presented a list of Key Issues (**Appendix C** refers) in regard to the development of ATFM rules for consideration by the meeting. Thailand highlighted that a consensus and clear direction from the meeting would better enable the ongoing development of the computer model for ATFM using BOBCAT. In discussing the key issues, the meeting noted a number of issues, as described in the following paragraphs.

Intermediate Gateways

4.8 In regard to assisting States to better manage enroute aircraft that merge over various points within India's airspace, Thailand advised the meeting that India had requested that, if possible, a facility for intermediate gateway fixes should be included in the BOBCAT design in order to relieve enroute "choke points". This, in turn, was expected to assist aircraft making their entry gate time into the Kabul FIR. Including this facility in the BOBCAT system did not imply that BOBCAT was a separation tool, but rather a flow management practice to effectively space aircraft to meet their entry gate time into the Kabul FIR.

4.9 Although the meeting considered that this facility may introduce undue complexity in respect to addressing the Phase One implementation requirements, Thailand agreed to incorporate the procedure in one of the BOBCAT paper trial exercises to enable an assessment of the value of this facility.

EMARSSH Principles

4.10 The meeting discussed the use of the IATA Traffic Orientation Scheme (TOS) proposed during the post implementation EMARSSH meeting held in March 2003. The meeting agreed that, at this stage, the proposed TOS would not be used within the context of the ATFM automated tool and operational trial.

4.11 In order to clarify the circumstances in relation to any relevant "EMARSSH Principles" the Secretariat advised the meeting that further research was required and that any relevant principles of EMARSSH would be presented during ATFM/TF/3.

Inclusion of Traffic Transiting or Affecting Traffic Through Kabul FIR

4.12 The meeting discussed which traffic would be required to submit slot allocation requests into the BOBCAT system, and agreed that all aircraft transiting the Kabul FIR would need to submit a slot request. In respect of traffic that would merge with the above traffic in India's airspace, but had not planned via Kabul FIR, the meeting considered whether this traffic should comprise part of the Phase One trial. Thailand agreed that they would conduct separate paper trials with and without non-Kabul-bound merging traffic and report the results to ATFM/TF/3.

Wheels Up Buffer

4.13 The meeting agreed that a Wheels-Up time buffer of plus 5 minutes would be added onto the 10-minute longitudinal parameter for sequencing into the Kabul FIR. This Wheels-Up parameter would be used for the BOBCAT paper trial.

Availability of Flight Levels

4.14 Delhi/Mumbai/Lahore departures were discussed within the context of BOBCAT. The meeting agreed to give priority at FL280 for these departures. It was also agreed that higher altitudes may be planned from these airports, but would be given a lower priority than aircraft departing from more easterly airports.

4.15 The meeting agreed that FL300 would not be available on parallel routes across the Bay of Bengal due to the assignment of FL300 to crossing traffic in this area, unless multilateral agreements between the ACCs concerned were put in place.

Slot Allocation Request Deadline

4.16 The meeting discussed the slot allocation request deadline (cut-off time for slot request). Different deadlines were considered where flights departing from eastern ports like Hong Kong would have an earlier deadline than those from western departure ports like Mumbai. The meeting recognized that this type of multiple deadline favoured aircraft departing from eastern locations. It was therefore agreed that BOBCAT should utilize a single cut-off time (slot allocation request deadline), which would include all traffic planned through Kabul FIR over the time period between 1900UTC and 2359UTC.

4.17 The exact timing of the slot request submission deadline would be further discussed at ATFM/TF/3, using the results from the BOBCAT paper trials.

Slot Allocation

4.18 The fairness of the slot allocation scoring algorithm was discussed and the meeting concluded that the slot allocation process should be completely random, except in the case mentioned in paragraph 4.13 above, rather than utilizing a credit points system of any kind. Thailand informed the meeting that the slot allocation for all flights would be visible to all dispatchers concerned.

4.19 In considering aircraft slot allocation switching post cut-off time, it was agreed that aircraft wishing to change slot allocation would first be required to cancel their previously allocated slot. The system design would ensure that only one slot was current for each flight and, in the context of switching slots, that the new slot would be allocated simultaneously with the old slot being released in order to protect against a slot being lost completely.

4.20 Malaysia proposed that BOBCAT should check for uniqueness of aircraft callsign when requesting slot allocation so that a flight could not submit more than one set of slot allocation requests. The principle was agreed to by the meeting, and Thailand would incorporate this into the BOBCAT design.

Contingencies – Missed Slot Time

4.21 The meeting discussed the situation where an aircraft missed their allocated slot time. The meeting was undecided whether the pilot should coordinate with airline dispatchers in procuring a new slot allocation or whether a new slot time could be obtained through the ATC unit concerned.

4.22 IATA advised the meeting of the pilot's difficulty in contacting airline dispatchers while operating outside home location, where each airline's dispatcher offices are located. Furthermore, the meeting was advised of the fact that most airlines treat departure within 15 minutes of scheduled departure as on time departure. In general terms approximately 80% of aircraft do depart on the scheduled time (i.e. within 15 minutes of ETD) however it was very evident that aircraft would regularly miss their slot time and the flow management arrangements would have to be flexible enough to address this without placing undue penalty on an aircraft that had missed its slot.

4.23 The meeting noted ICAO Annex 11-3.75 on Flow Management, which states that it is ATC unit's responsibility of advising ATFMU of aircraft delay in making slot time, and agreed that that contingencies related to aircraft missing slot time should be discussed in more detail when the results of the BOBCAT paper trials were available.

Contingencies – Weather

4.24 Thailand considered that that contingencies related to extreme weather conditions should not be an issue to BOBCAT since it was unlikely that airline dispatchers would request a route affected by extreme weather at the flight planning stage. ATS providers could also coordinate with ATFMU specialists regarding temporary closure of certain routes or flight levels affected by weather phenomena.

Safety Assessment

4.25 The Secretariat reminded the meeting of the provisions of Annex 11 Section 2.26 in relation to the responsibilities of States to ensure that an adequate level of safety is maintained in the provision of ATS within airspaces and at aerodromes. It would be necessary to discuss safety issues during ATFM/TF/3 to ensure that State responsibilities were met in this regard.

Special cooperative arrangements between India and Thailand

4.26 The meeting recognized that there were a number of unique and important operational issues that would need to be discussed between India and Thailand in close coordination and on a partnership basis in preparation for the implementation of the ATFM operational trial. In this regard the meeting encouraged both States to enter into special coordination and liaison activities to resolve these matters. It was requested that the parties routinely report progress in these matters to the ATFM/TF.

Thailand to Develop BOBCAT

4.27 In relation to Thailand's continued development of BOBCAT, the meeting recognized that it was not feasible for the Task Force to meet to address each and every question and difficulty that would arise during the development process. The meeting was therefore of the opinion that Thailand should use initiative and judgment in developing BOBCAT and to subsequently demonstrate the capabilities of BOBCAT via paper trials. This would allow Thailand to make decisions and select parameters that would allow it to move forward in development, and would also allow the Task Force to assess the suitability of the decisions/parameters so selected via the paper trial process and initiate changes to the parameters if warranted. Accordingly, the meeting requested Thailand to continue with the development of BOBCAT on this basis, noting that the outcomes of the December operational trial would also be formally assessed by the Task Force.

Agenda Item 5: Review Draft AIC and Draft AIP SUP documentation

5.1 The meeting reviewed and updated the draft AIC that had been prepared by the Task Force, and included amendments that were agreed during the meeting.

5.2 The meeting agreed that the AIC should be issued as soon as possible in order to provide the maximum notice of the commencement of the operational trial on 22 December 2005. The meeting requested India, Malaysia, Pakistan, Singapore and Thailand to issue an AIC using the agreed text shown in the sample AIC contained in **Appendix D.**

5.3 In noting the difficulties that had been experienced in contacting Pakistan in respect of the activities of the ATFM/TF, the meeting agreed, in order not to delay the operational trial, that if concurrence to the AIC sample wording could not be readily obtained from Pakistan, paragraph 1.1 of the sample AIC should be redrafted to omit the words "….and Pakistan…". The remainder of the sample AIC could remain as presently drafted. The Regional Office agreed to undertake urgent coordination with Pakistan in this regard and advise affected States of the outcomes as soon as possible, in order that the AIC could be published.

5.4 During APANPIRG/16 (22 – 26, August 2005) the Regional Office established communication with Pakistan and, after due coordination, Pakistan agreed to the issuance of the AIC, including the words "….and Pakistan…" in paragraph 1.1.

5.5 In respect of the drafting of a suitable AIP Supplement to support the operational trial, the meeting agreed that this work would be more usefully completed during ATFM/TF/3, at which point it was expected that the development of BOBCAT would be at a stage where interface and operational requirements could be appropriately defined.

Agenda Item 6: Flow Management Handbook

6.1 The meeting recalled the guidance provided under ICAO DOC 4444 (PANS-ATM) chapter 3.2.1.5 in respect to including regional ATFM procedures and services in a regional manual or handbook and noted that ATFM/TF/1 had agreed that an ATFM Operations Handbook of some kind should be developed as a Task List item. The meeting also recalled that ATFM/TF/1 had agreed that the Flow Management Handbook should include the operating procedures and associated guidance material for the ATFM Unit, ATS providers and airline operators, and had structured the handbook in a two-part format under which Part I was assigned to the "Traffic Management Plan" and Part II assigned to the "ATFM System Tool & Operations."

6.2 The meeting recognized that the Handbook would need to incorporate a significant amount of information that would not be available until after the paper trials of the BOBCAT system had been conducted. In noting the limited time available to his meeting, the meeting urged core team members to continue preparation of the Handbook as far as possible and provide a suitable update to the ATFM/TF/3 meeting in this regard.

Agenda Item 7: Review and Update ATFM/TF Task List

7.1 The meeting noted the updated Task List (**Appendix E** refers) that incorporated the inputs and discussions that had occurred during ATFM/TF/2. The meeting did not identify further amendments or updates to the Task List.

Agenda Item 8: Any other business

8.1 In recognizing the volume of work still to be completed in order to meet the December implementation target date for an operational trial, the meeting discussed the timing and location of the ATFM/TF/3 meeting. It had been previously recognized by the Task Force that efforts should be made to hold this meeting in Pakistan, in order to ensure that Pakistan was involved in the work of the Task Force. However, due to the lack of response by Pakistan to communications from the Regional Office and the Chairman, the Secretariat advised the meeting that ATFM/TF/3 would be hosted by the Regional Office in Bangkok over 4 days, from 6-9 September 2005. Invitations would be issued by the Regional Office this week.

NetMeeting over Internet

8.2 In an effort to accelerate coordination between all parties involved as well as to reduce costs, Thailand presented details in regard to the possibility of using Microsoft Windows Messenger in combination with Microsoft NetMeeting (free software for users of Windows 2000 and Windows XP) in hosting an online meeting which would be capable of:

a) Voice Conference
b) Video Conference (if the users' Internet connection bandwidth permits)
c) View Sharing of a Presentation so that one or two parties have control of participants' view of the host's computer screen to be used in showing a presentation and amending as agreed.

8.3 If the Internet connection bandwidth of a member of the meeting was limited, a conference telephone call could be used to augment the View Sharing facilitated by NetMeeting.

8.4 The meeting agreed that the use of internet meeting mechanisms was worthwhile and would save time and money as well as increasing the efficiency of the Task Force. The meeting strongly encouraged Thailand (AEROTHAI) to utilize online conferencing to facilitate collaboration with other members of the Task Force in developing BOBCAT.

Closing of the meeting

8.5 The Chairman thanked all participants for their active participation and cooperation which had contributed significantly to the successful outcome of the meeting. The Chairman also expressed his sincere appreciation to the Civil Aviation Authority of Singapore and the Singapore Aviation Academy for hosting the SCM ATFM/TF PMT meeting.

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LIST OF PARTICIPANTS

STATE/NAME	DESIGNATION/ADDRESS	CONTACT DETAILS
AUSTRALIA		
Mr. Ron Rigney	ATM International Liaison Manager Airservices Australia Locked Bag 747 Eagle Farm QLD Australia 4009	Tel : +61 7 3866 3487 Fax : +61 7 3866 3402 E-mail: ron.rigney@airservicesaustralia.com
INDIA		
Mr. V Somasundaram	General Manager (Air Traffic Management) Airports Authority of India India	Tel : +91 11 2465 2648 Fax : +91 11 2461 1078 E-mail: gmatmchqnad@aai.aero
Mr. M Sarangapani	DGM (ATC) Airports Authority of India c/o The General Manager (Aero) Chennai AAI, Southern Region ATS Complex, Chennai Airport Chennai 600027, India	Tel : +91 44 2256 1538/2234 0885 Fax : +91 44 2256 1740 E-mail: sarankan@rediffmail.com
INDONESIA		
Mr. Herman Irsadi	Staff Officer PT Angkasa Pura I ATS Services Division Jakarta, Indonesia	Tel : +62 654 1961 Fax : +62 654 1513 E-mail: herman_irsadi@angkasapura1.co.id
MALAYSIA		
Mr. Richard Tan Hock Chye	Air Traffic Control Officer Dept. Civil Aviation Malaysia Air Traffic Control Centre Block B SAAS Intl Airport 47200 Subang, Selangor	Tel : +603-7847 3573 Fax : +603-7847 3572 E-mail: bmrich@hotmail.com
Mr. Kamardi Suhaili Othman	Air Traffic Control Officer Dept. Civil Aviation Malaysia Air Traffic Control Centre Block B SAAS Intl Airport 47200 Subang, Selangor	Tel : +603-7847 3573 Fax : +603-7847 3572

STATE/NAME	DESIGNATION/ADDRESS	CONTACT DETAILS
SINGAPORE		
Mr. Kuah Kong Beng	Chief Air Traffic Control Officer Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel : +65-6541 2405 Fax : +65-6545 6516 E-mail: kuah_kong_beng@caas.gov.sg
Mr. Edmund Heng Cher Sian	Project Officer (Airspace) Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel : +65-6541 2457 Fax : +65-6545 6516 E-mail: edmund_heng@caas.gov.sg
Mr. Loke Chee Yong	ATC Manager Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel : +65 6541 2668 Fax : +65 6545 6252
Mr. Tan Yean Guan	Air Traffic Control Officer Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel : +65 6541 2668 Fax : +65 6545 6252
THAILAND		
Mr. Tinnagorn Choowang	Air Traffic Control Manager En-route Air Traffic Management Department AEROTHAI 102 Ngamduplee Tungmahamek, Sathorn Bangkok 10120, Thailand	Tel : +66 2 285 9975 Mobile :+66 09 816 6486 Fax : +66 2 285 9077 E-mail : tinnagorn.ch@aerothai.co.th
Mr. Piyawut Tantimekabut	Engineer Air Traffic Services Engineering Research & Development Department Aeronautical Radio of Thailand Ltd. 102 Ngarmduplee, Tungmahamek Sathorn, Bangkok 10120 Thailand	Tel : +66-2-287 8616 Fax : +66-2-287 8620 E-mail :piyawut@aerothai.co.th

STATE/NAME	DESIGNATION/ADDRESS	CONTACT DETAILS
Mr. John Richardson	ATM Consultant Aeronautical Radio of Thailand Ltd. 102 Ngarmduplee, Tungmahamek Sathorn, Bangkok 10120 Thailand	Mobile: +66-01-8242467 E-mail :jricho282@yahoo.com
UNITED STATES		
Mr. Howard W. Nesbitt	Senior FAA Representative FAA-IAO American Embassy 27 Napier Road Singapore 258508	Tel : +65 6540 4122 Mobile: +65 9459 7845 Fax : +65 6543 1952 E-mail :howard.nesbitt@faa.gov
IATA		
Mr. Soon Boon Hai	Assistant Director, Safety Operations & Infrastructure – Asia/Pacific International Air Transport Association 77 Robinson Road #05-00, SIA Building Singapore 068896	Tel : +65-6239 7267 Fax : +65-6536 6267 E-mail :soonbh@iata.org
Mr. Owen Dell	Manager International Operations Cathay Pacific Airways Limited International Affairs Department 9/F Central Tower, Cathay Pacific City 8 Scenic Road Hong Kong International Airport Lantau, Hong Kong, China	Tel : +852 2747 8829 Fax : +852 2141 8829 E-mail : owen_dell@cathaypacific.com
Capt. Aric Oh	Deputy Chief Pilot (Technical) Singapore Airlines Limited Flight Operations Technical SIA Training Centre, SIN-STC-04C 720 Upper Changi Road East Singapore 486852	Tel : +65-6540 3694 Fax : +65-6542 9564 E-mail : aric_oh@singaporeair.com.sg
Capt. K. Sengkuttuvan	Mgmt Pilot Special Duties Flight Operations Division Singapore Airlines SIA Training Centre, 04-C 720 Upper Changi Road East Singapore 486852	Tel : +65-6540 3410 Fax : +65-6542 9564 E-mail : sengkuttuvan_k@singaporeair.com.sg

STATE/NAME	DESIGNATION/ADDRESS	CONTACT DETAILS
Mr. Victor Yeoh	Manager Flight Operations (Technical) Flight Operations Division Singapore Airlines SIA Training Centre 04-C 720 Upper Changi Road East Singapore 486852	Tel : +65-6540 3406 Fax : +65-6542 9564 E-mail : victor_yeoh@singaporeair.com.sg
Mr. A Purushotamadas	Assistant Manager Flight Operations Technical Flight Operations Division Singapore Airlines SIA Training Centre 04-C 720 Upper Changi Road East Singapore 486852	Tel : +65 6540 3415 Fax : +65 6542 9564 Email : a_purushotamadas@singaporeair.com.sg
Mr. Imram Mohd	Snr Manager Flight Control Centre Flight Control Centre Singapore Airlines 720 Upper Changi Road East Singapore 486852	Tel : +65 6540 3122 Fax : +65 6543 0655 E-mail : imram_mohamed@singaporeair.com.sg
Capt. K Sengkuttuvan	Management Pilot - Special Duties Flight Operations Division Singapore Airlines Training Centre 720 Upper Changi Road East Singapore 486852	Tel : +65 6540 3410 Fax : +65 6542 9564 E-mail : sengkuttuvan_k@singaporeair.com.sg
IFALPA		
Capt. Suresh Menon	Regional Vice President (East-Asia) IFALPA 24, Pasir Ris Heights Singapore 519231	Tel : +65 6582 2593 Fax : +65 6584 8869 E-mail: menon@pacific.net.sg
IFATCA		
Mr. G Kannan	Air Traffic Control Officer Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel : +65 6541 2668 Fax : +65 6545 6252
Mr. Sivaji	Air Traffic Control Officer Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel : +65 6541 2668 Fax : +65 6545 6252

STATE/NAME	DESIGNATION/ADDRESS	CONTACT DETAILS
ICAO		
Mr. Andrew Tiede	Regional Officer, ATM ICAO Asia & Pacific Office P.O.Box 11 Samyaek Ladprao Bangkok – 10901 Thailand	Tel : +66-2-5378189 Fax : +66-2-5378199 E-mail :atiede@bangkok.icao.int

Terms of Reference for the Air Traffic Flow Management Task Force for the Bay of Bengal and South Asia region (ATFM/TF)

The Air Traffic Flow Management Task Force (ATFM/TF) will report via the BBACG to the ATM/AIS/SAR Sub Group of APANPIRG.

Objectives:

The objectives of the ATFM/TF are to:

1. To enhance and facilitate the orderly and efficient flow of air traffic across the Bay of Bengal and South Asia;

2. To minimize ground and enroute delays;

3. To maximize capacity and optimize the flow of air traffic within the area;

4. To plan for and manage future ATS workload in the light of forecast increased traffic flow within the area; and

5. To assess the economic and environmental impact of the implementation of the ATFM system.

Implementation Programme

To meet these objectives the ATFM/TF shall adopt 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

(Note: For the purposes of the ATFM/TF, South Asia includes India, Nepal, Pakistan and Sri Lanka).

Bay of Bengal Cooperative Air Traffic Flow Management Advisory System (BOBCAT)

Special Coordination Meeting (ATFM Project Management Team)

10-11 August 2005

Presented by ***AEROTHAI***

Overview of Key Issues

- EMARSSH Route Structure already in place
  - Principles of the EMARSSH Route Structure to be used
- Ongoing coalition military operations in Afghanistan
  - What change can we expect in the future?
- RVSM → CVSM in Kabul FIR
  - Likely to remain for some time
  - India/Pakistan Procedures in allocation of CVSM levels through Kabul

Overview of Key Issues

- Aircraft departing from different locations either transiting or affecting transit through Kabul FIR

- Definition of ATFM Area
  - Entry Gates into ATFM Area
  - Intermediate Gates on Converging Routes
  - Entry Gates into Kabul FIR
  - Exit Gates from Kabul FIR
  - Consideration of all flights from major departure points

Overview of Key Issues

- Spacing between aircraft at gates mentioned
  - Wheels up time
  - Differential in Mach Number
    - Should Mach Number Technique be a factor where necessary for aircraft operation through Continental India/Pakistan/Afghanistan
  - Pakistan/India Agreement for aircraft to be spaced 5 minutes apart when diverging at DI
  - DOTS+ uses 10 minutes separation + 10 minutes wheels up buffer

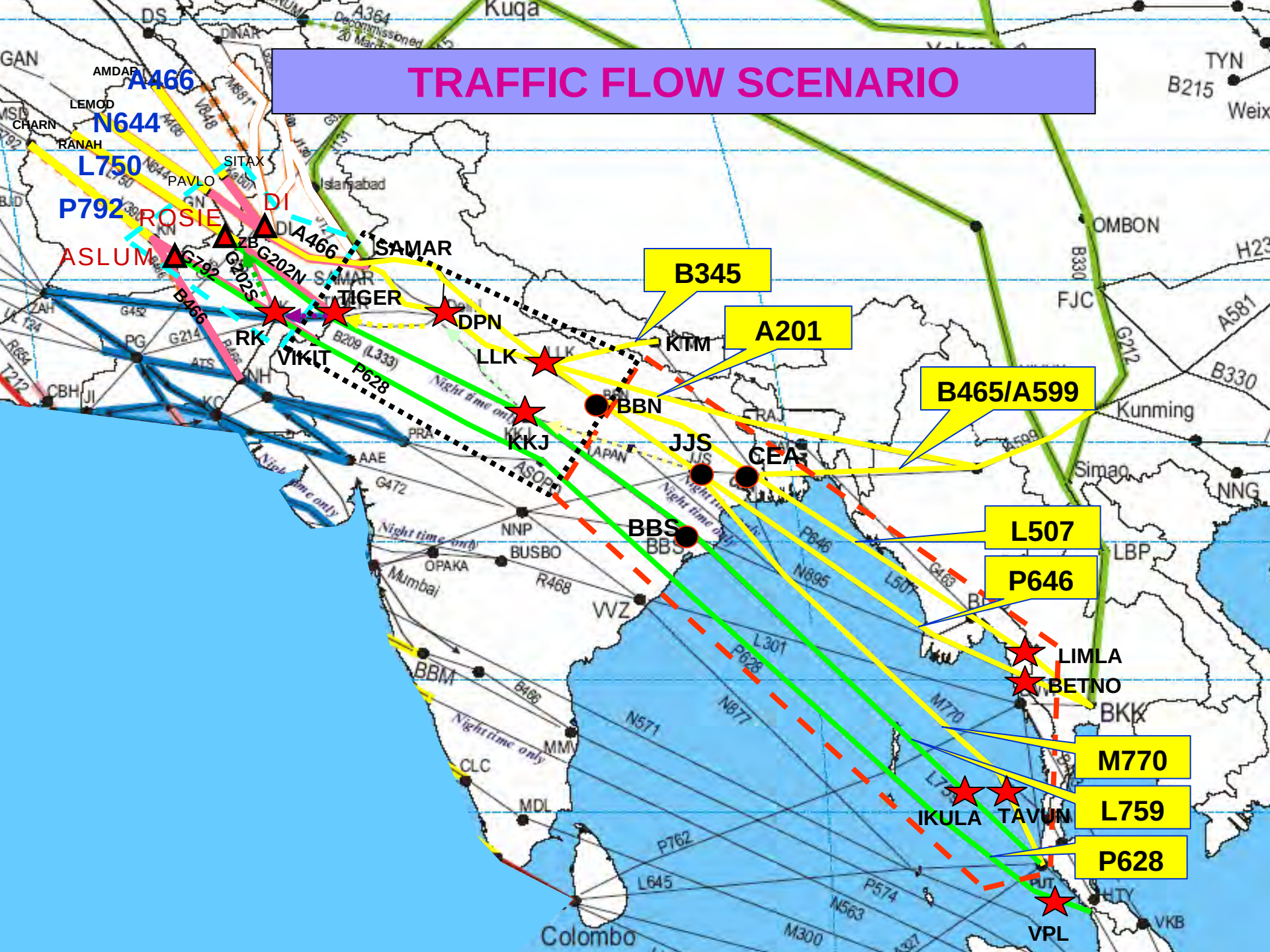
Overview of Key Issues

- Availability of Flight Levels
  - On departure/ over Bay of Bengal
  - Through Kabul FIR
- Slot Allocation Request Deadline(s)
  - Is one enough?
- Slot Allocation Principles
  - Pre-Deadline Submission
  - Post-Deadline Submission

Overview of Key Issues

- Contingencies
  - Procedure for aircraft outside their wheels up or entry gate allocation time
    - Delays caused by operational or technical reasons
    - Possible tactical considerations used by Aerodrome controllers to get aircraft to entry gates on time
    - Procedure in coordination required in allocating a new slot time
  - Weather considerations
    - Availability of routes

TRAFFIC FLOW SCENARIO



Q & A

Presented by ***AEROTHAI***

Thank You!

BOBCAT

Flow Management Advisory System

Development Team

Presented by AEROTHAI

Phone : 65-65412426
AFS : WSSSYNYX
Fax : 65-65431826
Email : caas_singaporeais@caas.gov.sg
Website: http://www.caas.gov.sg

REPUBLIC OF SINGAPORE

AERONAUTICAL INFORMATION SERVICE
CIVIL AVIATION AUTHORITY OF SINGAPORE
SINGAPORE CHANGI AIRPORT
P.O. BOX 1, SINGAPORE 918141

AIC

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IMPLEMENTATION OF AN AIR TRAFFIC FLOW MANAGEMENT (ATFM) OPERATIONAL TRIAL OVER THE BAY OF BENGAL AREA AND SOUTH ASIA

1.0 Implementation of ATFM Operational Trial Procedures

1.1 This AIC serves as notice that States in the Bay of Bengal, Indian sub-continent and Pakistan areas have jointly agreed to implement an air traffic flow management operational trial. This trial will be conducted under the auspices of ICAO and will be focused on traffic operating across the Bay of Bengal area towards northern India and the Kabul FIR.

1.2 The tentative date for implementation of the ATFM operational trial is 22 December 2005. Details of the trial, including States involved, airspace concerned and procedures to be followed by operators will be promulgated in due course by AIP Supplement in accordance with the AIRAC cycle procedures.

1.3 It is anticipated that all westbound flights crossing defined points in the specified FIRs, including those operating in the Kabul FIR between 1900UTC and 2400UTC, will be required to participate in the ATFM operational trial.

1.4 Accordingly all civil flights operating in the area concerned during the period that Flow management procedures are in force will be required to comply with specific flight planning requirements. These requirements will be detailed and published in appropriate AIP Supplements.

1.5 The results of the trial will be subject to review by ICAO, States and operators concerned.

2 Objectives of the ATFM Operational Trial

2.1 The ATFM operational trial is focused on the following objectives:

(a) Reduced ground delays at departure airports.

(b) An informed choice of routing and flight level selection.

(c) A reduction in the requirement for re-routing over the Indian sub-continent

TASK LIST FOR THE IMPLEMENTATION OF AN ATFM ADVISORY SYSTEM TRIAL IN THE BAY OF BENGAL (VERSION 2.0)

ID	Task Name	Start Date	Finish Date	Completion Date	Action By	Resource Names/Remarks
1.0	**Operational Issues**					
1.1	Identify Operational Needs		9 Sep 2005			
1.2	Co-ordinate and update Operational Concept		9 Sep 2005			
1.3	Define ATFM airspace/States involved		9 Sep 2005			
1.4	Define data collection plan	01 May 2005				Regional data captured Apr 05; India provided additional data 9 – 15 May 2005
1.5	Examine the operational factors and workload associated with implementation	22 Apr 2005				
1.6	Determine required ATFM tools		1 July 2005			AEROTHAI BOBCAT system to commence ATFM system trial by 31 December 2005
1.7	Develop, coordinate and submit necessary international and regional documentation					Refer to ATM/AIS/SAR/SG for guidance/advice on multi-lateral agreements required.
2.0	**Develop ATFM Operations Manual and Procedures**	1 Jul 2005	9 Sep 2005			
2.1	Develop ATFMU procedures					
2.2	Develop ATS Unit(s) procedures					
2.3	Develop Airline procedures					
2.4	Develop contingency procedures					(e.g ATFM system/comm. outage)
3.0	**Establishment of an ATFMU**					
3.1	Determine operating hours, manning and equipment requirements		9 Sep 2005			
3.2	Coordination and communications requirements with ATS Unit(s) and Airlines	1 July 2005				
3.3	Assess workload and procedures for ATFMU and Airlines					

ID	Task Name	Start Date	Finish Date	Completion Date	Action By	Resource Names/Remarks
4.0	**Financial considerations**					
4.1	Determine funding arrangements for operation of ATFM service					Not required for trial – will be discussed prior to acceptance of ATFM system
5.0	**Determination of Communication and Interface links**					
5.1	Establishment of communication/interface links between ATFMU and ATS Unit(s)	1 Jul 2005	15 Dec 2005			Further discussions at ATFM/TF/3
5.2	Establishment of communication/interface links between ATFMU and Airlines	1 Jul 2005	15 Dec 2005			Further discussions at ATFM/TF/3
6.0	**Complete coordination with adjoining States and Industry organisations**					
6.1	Publish AIC on the ATFM trial	1 Jul 2005	4 Aug			
6.2	Publish necessary AIP Supplement					
6.3	Publish Trigger NOTAM		24 Dec 2005			7 days prior to implementation
7.0	**SMS requirements as per Annex 11**					Satisfy requirements of ATFM against Annex 11 SMS
8.0	**Training**					
8.1	Conduct training for Air Traffic Controllers and Airline Dispatchers					
8.2	Information dissemination to Airlines					
9.0	**Perform system verification**					
9.1	Conduct verification of ATFM system tool					
9.2	Conduct and review paper exercise					

ID	Task Name	Start Date	Finish Date	Completion Date	Action By	Resource Names/Remarks
10.0	**Decision for the commencement of operational trial**					
10.1	Review all factors affecting implementation decision					
10.2	Declare full operational trial capability					
11.0	**Decision to proceed to full implementation of ATFM Phase One for Bay of Bengal using BOBCAT system**					
12.0	**Post implementation review of operational trial**					
12.1	Carry out post implementation review					
13.0	**Monitor System Performance**					
13.1	Perform follow-on monitoring					