

**INTERNATIONAL CIVIL AVIATION ORGANIZATION  
ASIA AND PACIFIC OFFICE**



**SUMMARY OF DISCUSSION  
SPECIAL ATS COORDINATION MEETING  
– GO/NO GO DECISION IN RESPECT OF THE BAY OF BENGAL  
AIR TRAFFIC FLOW MANAGEMENT OPERATIONAL TRIAL  
(SCM GO BOB ATFM)**

AEROTHAI HEADQUARTERS,

BANGKOK, THAILAND

14 to 16 JUNE 2006

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

SCM GO BOB ATFM  
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## 1.1 Introduction

1.1.1 The Special ATS Coordination Meeting – Go/No Go Decision in respect of the Bay of Bengal Air Traffic Flow Management Operational Trial (SCM GO BOB ATFM) was held at the Headquarters of Aeronautical Radio of Thailand Limited in Bangkok, Thailand on 14 to 16 June 2006.

1.1.2 The meeting was held in order to progress the work programme of the Air Traffic Flow Management Task Force (ATFM/TF) convened under the auspices of the ICAO Bay of Bengal ATS Coordination Group (BBACG) towards the implementation of an operational trial of ATFM in the Bay of Bengal. In particular, the SCM GO BOB ATFM was required to consider a Go/No Go decision in respect of the commencement of an ATFM operational trial.

## 1.2 Officers, Secretariat and Participants

1.2.1 The meeting was opened by Mr. Andrew Tiede, Regional Officer ATM, on behalf of Mr. L. B. Shah, ICAO Asia Pacific Regional Director.

1.2.2 Mr. Ron Rigney, ATM International Liaison Manager, Airservices Australia presided over the meeting. Mr. Tiede acted as the Secretary of the meeting.

1.2.3 In his opening remarks Mr. Ron Rigney welcomed the participants to the Special ATS Coordination Meeting and provided an outline of the program that would assist the Core Team members with making the final “Go” or “No Go” decision in respect to the commencement of the operational trial, presently scheduled to commence on 6 July 2006.

1.2.4 On behalf of the ATFM Task Force and Core Team members, Mr. Rigney expressed his deep appreciation to Aeronautical Radio of Thailand Limited (AEROTHAI) for providing the meeting facilities and for facilitating a tour of inspection of the ATFMU facilities.

1.2.5 Mr. Rigney also took the opportunity to convey the very best wishes of the ATFM Task Force members to the representatives from Thailand, on the occasion of the 60<sup>th</sup> anniversary of the reign of His Majesty King Bhumibol Adulyadej of Thailand.

1.2.6 In his opening remarks, Mr. Nopadol Sang-ngurn, Executive Expert of Aeronautical Radio of Thailand Ltd welcomed all participants to AEROTHAI Headquarters, noting that AEROTHAI was pleased to host such an important meeting of the Task Force. He informed the meeting that, in making the decision to develop BOBCAT, the Executive of AEROTHAI had given their full support to the Bay of Bengal and South Asia ATFM programme. AEROTHAI would ensure that all their facilities and functions associated with BOBCAT activities and operations would be fully ready prior to the trial period of operations.

1.2.7 The meeting was attended by 22 participants from Australia, India, Malaysia, Singapore, Thailand and IATA. A list of participants is at **Appendix A**.

## 1.3 Documentation and Working Language

1.3.1 The meeting was conducted in English. All meeting documentation was in English.

1.3.2 Sixteen (16) working papers, one (1) information paper and one (1) flimsy were presented to the meeting. A list of the papers is at **Appendix B**.

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**Agenda Item 1: Adoption of Agenda**

1.1 The meeting adopted the following agenda:

- Agenda Item 1: Adoption of Agenda
- Agenda Item 2: Review Level of Preparedness
- Agenda Item 3: Go/No Go Decision
- Agenda Item 4: Implementation Management Considerations
- Agenda Item 5: Any other business
- Agenda Item 6: Future Work

**Agenda Item 2: Review Level of Preparedness**

*Visit to the ATFMU*

2.1 The meeting took into account that the generous offer by AEROTHAI to host the meeting at AEROTHAI Headquarters would enable task force participants to physically inspect the Air Traffic Flow Management Unit (ATFMU) which had been constructed adjacent to the Bangkok ACC.

2.2 Accordingly, a familiarization visit to the ATFMU was arranged for all delegates, during which a full inspection of the ATFMU was carried out. Delegates noted the high quality of the new furnishings and equipment, including fax machines, telephones, computers, cupboards and desks that had been purchased and installed by AEROTHAI. The ATFMU was next door to the Bangkok ACC enabling easy access between the two facilities.

2.3 Delegates also inspected the equipment room, noting that all equipment for the BOBCAT including duplicated computer servers and web hosting apparatus had been installed in an additional equipment rack beside existing racks in the ACC equipment room. This enabled the existing uninterruptible power supplies etc. that were already required to service the ACC to be utilized for BOBCAT and also meant that the technical staff who were already familiar with this type of equipment were available H24 to support the BOBCAT operation.

2.4 Delegates were impressed by the ATFMU facilities and expressed their appreciation for the significant infrastructure investment that had been made by AEROTHAI in this respect.

*BOBCAT system development and improvements*

2.5 Thailand updated the meeting in relation to recent developments and enhancements to the BOBCAT system. The following performance enhancement of the BOBCAT slot allocation mechanism had been achieved:

- a) Time taken to process slot allocation at cutoff time has been reduced to an average of less than 5 minutes. This varies depending on the amount of slot request options submitted;

- b) Average response time for viewing free slots that are available in the system has been reduced from 30 seconds to 15 second; and,
- c) Average time to allocate slot after cutoff time has been reduced to 10 seconds.

2.6 A number of significant changes had been developed and are proposed for incorporation into BOBCAT System as Version 1.02. These included, but are not limited to, the following:

- a) Slot Request information in all slot request pages can now be sorted by order of ETD, callsign, etc, enabling dispatchers responsible for multiple flights to keep track of slot requests more easily;
- b) During the time the BOBCAT system is processing slot allocation for the current day, a message would appear on the slot request page to advise that the system was now allocating slots. This message will change to notify that slot allocation is completed once all slot allocation is processed so that dispatchers can be re-directed to the proper slot allocation page;
- c) Mach number input is removed from user interface in accordance with the request from ATFM/TF/6 meeting;
- d) Updates to slot allocation results are shown with yellow blinking dots symbol denoting slot allocation results update next to aircraft call signs. This would enable appropriate actions to be taken by ANSPs in distributing slot allocation results within their organization, while enabling dispatchers to note updates to slot allocation results as well as the possibility of better slots becoming available.
- e) Each computer showing BOBCAT slot allocation results will highlight changes made by dispatchers. This highlight would remain active until the individual viewing slot allocation results page acknowledges the changes. This may prompt ANSPs to re-sort their traffic flow information after changes have been made.
- f) Slot Allocation results shown on the “Flight Allocation” page would be divided into different tables in the following order:
  - 1. Flights with Slot Allocation;
  - 2. Flights without Slot Allocation; and,
  - 3. Flights that cancelled Slot Allocation;
- g) In order to assist airlines in obtaining their preferred slot allocation, Slot Allocation results shown in “Waypoint Allocation” page would be divided into different tables in the following order:
  - 1. Current Slot Allocation at selected waypoints; and,
  - 2. Previously Used Slot Allocation at selected waypoints;

- h) Slot selection process for aircraft transiting DI to enter Kabul FIR at waypoint PAVLO/SITAX is streamlined;
- i) BOBCAT Forms available in Adobe Acrobat format on which information can be electronically filled in to improve ease-of-use; and
- j) BOBCAT Help Pages and Concept of Operations would be updated to reflect changes in BOBCAT Version 1.02.

2.7 The meeting noted and endorsed the changes to be included as Version 1.02, agreeing that they should be loaded to the BOBCAT as soon as possible. However, in order to provide a stable operating platform for use during the operational trial, the meeting agreed that once Version 1.02 was loaded no further change would be made to the software configuration until after the ATFM/TF/7 review meeting. Participants were encouraged to continue to develop software enhancements that could be prepared 'off-line' and introduced into the next software version upgrade after review by the next task force meeting.

*Note: BOBCAT Version 1.02 was loaded on 16 June 2006.*

Airline Participation

2.8 Thailand reported that over the past three months, the BOBCAT website had been available to allow dispatchers to submit slot request for their aircraft and view the results after the cutoff time of 1200UTC. Participation rates of airlines had been steadily increasing over this period, with many airlines regularly 'testing' the system.

2.9 The list of airlines which transit the Kabul FIR between 2000 – 2359UTC and have logged on and submitted slot requests to BOBCAT is provided below:

Air France	EVA Air	Royal Dutch Airline (KLM)
Austrian Airlines	FinnAir	Scandinavian Airline System
British Airways	Lufthansa	Singapore Airlines
Cathay Pacific	Malaysian Airlines	Swiss
China Airlines	Qantas Airways	Thai Airways

2.10 Airlines which had not as yet logged on but are known to fly through the Kabul FIR during the ATFM period are shown below. Although Air India had originally been considered in this category, investigation had shown that Air India did not have flights through Kabul FIR during the period sequenced by BOBCAT. Airlines should make an application for the issue of BOBCAT user name and password via email to [atfmu@bobcat.aero](mailto:atfmu@bobcat.aero) as soon as possible.

Aeroflot	Pakistan International	Viet Nam Airlines
Air Canada	Uzbek	

2.11 The meeting recalled that representatives from Pakistan International Airlines (PIA) had attended the training/briefing sessions conducted by the mission to Pakistan on 8 & 9 April 2006. In this context, it was likely that PIA was fully aware of the ATFM operational trial, however the Chairman and BOBCAT development team would again contact these PIA representatives to ensure their active involvement in the trial.

2.12 In respect of Vietnam Airlines, they had recently applied for and been granted a user name and password for BOBCAT. Additionally, Thailand was finalizing arrangements for a mission

to Hanoi and Ho Chi Minh to be conducted next week. This mission would fully brief the Air Navigation Service Providers and Vietnam Airlines regarding the ATFM operational trial and would encourage Vietnam to issue the AIP Supplement and trigger NOTAMs. The mission would also attempt to contact Aeroflot and Uzbek Airlines who were operating flights out of Vietnam.

2.13 Many attempts had been made to contact Aeroflot and Uzbek airlines, unfortunately without success. Further attempts would be made by all parties in this respect and the Regional Office would write to the EUR/NAT Office of ICAO in Paris to request assistance in contacting these airlines. In any event, the trial procedures detailed in the AIP Supplements included provision for aircraft that did not have slots and flights from these airlines could be adequately managed under these arrangements.

#### AIP Supplement

2.14 As part of the preparations for the ATFM operational trial, the Task Force had prepared and distributed a model text to provide the basis for States to develop and promulgate appropriate AIP Supplements.

2.15 The Task Force recognized the critical role that would be played by airline operators and ATC Units in applying the procedures contained in the AIP Supplement. As such, it was necessary for all participants likely to be affected by the conduct of the operational trial to be fully aware of, and comply with, the procedures contained in the AIP Supplement. Accordingly, the ATFM/TF recommended that all States with affected operators and/or ATC Units should publish the AIP Supplement as soon as possible.

2.16 The model AIP Supplement was distributed widely via ICAO State Letter [Ref: T3/8.13.2 – AP013/06(ATM), dated 24 February 2006]. Subsequently Hong Kong China, India, Malaysia, Myanmar, Pakistan, Singapore and Thailand had issued AIP Supplements based on the model provided. Thailand advised the meeting that a delegation from AEROTHAI would be visiting Viet Nam before the commencement of the operational trial and would encourage Viet Nam to also issue the AIP Supplement.

2.17 The meeting reviewed the model AIP Supplement that had been circulated and agreed that the information was still accurate and no corrections or additional material was required to be promulgated by NOTAM prior to the commencement of the trial.

#### ATFM Handbook

2.18 The meeting reviewed the ongoing work on the draft ATFM Users Handbook, updating the Handbook in accordance with feedback received prior to and during the meeting. The meeting agreed that this version of the Handbook should be advanced from a draft document to the initial issue of the ATFM Users Handbook. Accordingly, Version 1 of the Handbook (**Appendix C** refers) would be released via the BOBCAT website as soon as possible.

2.19 In order to provide a stable document for use during the operational trial, the meeting agreed that no changes would be made to Version 1 of the Handbook until after the ATFM/TF/7 Trial Review meeting. The meeting recognized that further improvements to the Handbook would be necessary based on the experiences gained during the operational trial, but that changes and enhancements would be included in an updated Handbook once they had been considered and endorsed by the ATFM/TF. Participants were encouraged to continue to review the Handbook in this context and bring draft updates to the next meeting.

Training Guidelines for ANSPs

2.20 The meeting also reviewed the ongoing work on the draft BOBCAT Training Guidelines for Air Navigation Service Providers, updating the Training Guidelines in accordance with feedback received prior to and during the meeting. The meeting agreed that this version of the Training Guidelines should be advanced from a draft document to the initial issue of the ANSP Training Guidelines. Accordingly, Version 1 of the Training Guidelines (**Appendix D** refers) would be released via the BOBCAT website as soon as possible.

2.21 In order to provide a stable document for use during the operational trial, the meeting agreed that no changes would be made to Version 1 of the Training Guidelines until after the ATFM/TF/7 Trial Review meeting. The meeting recognized that further improvements to the Training Guidelines would be necessary based on the experiences gained during the operational trial, but that changes and enhancements would be included in an updated Training Guidelines document once they had been considered and endorsed by the Task Force. Participants were encouraged to continue to review the Training Guidelines in this context and bring draft updates to the next meeting.

India Readiness

2.22 India re-affirmed its full co-operation and support to the proposed ATFM operational trial of the BOBCAT system to optimize the capacity at the entry points to Kabul FIR. In preparation for the trial India had put in place and tested necessary infrastructure in Delhi ACC, issued the AIP Supplement (Number 14/2006, effective 1<sup>st</sup> June 2006) to support the BOBCAT trial operations and the familiarization training for all affected ATCOs was in progress and would be completed prior to the commencement of ghosting.

2.23 India reassured the meeting that, as a result of the improvements to traffic handling capability in Indian FIRs as discussed at Agenda Item 5 of this report, India would continue to accept all flights without any restrictions and would also ensure availability of optimum flight levels to all flights.

Malaysia Readiness

2.24 In preparing for the operational trial, Malaysia informed the meeting that the AIP Supplement had been issued well in advance and all infrastructure requirements were in place, including internet connected desktop PCs in relevant work areas. A direct line to the ATFMU had been installed and tested and copies of the 'Frequently asked Questions' from the BOBCAT website had been distributed to ATCO Staff, as well as the ATFM Users Handbook and ANSP Training Guidelines. Training for affected staff members would be coordinated next week.

2.25 Malaysia raised the matter of the bunching of traffic at intermediate waypoints, expressing concern that in these circumstances tactical traffic management was restricted to two methods, vertical or time separation. Provision of vertical separation was hampered by the availability of only FLs 280 and 320. This was further constrained by the small level band acceptable to the B744s during the initial phase of the flight.

2.26 In discussing the matter, the meeting noted that the data reviewed by Malaysia was based on a synthetic data set in which 54 aircraft transited the Kabul FIR during a 2 hour period from 2100- 2300. This was an overload situation that had been constructed to test BOBCAT and it was anticipated that traffic loadings for the operational trial would not be of this magnitude.

2.27 The meeting considered that solutions to the problems described could lie in vertical separation utilizing lower levels like FL260 and below, or a revision of the operational LOA with



Bangkok ACC to allow for radar separation to be accepted by Bangkok ACC, and for the conflicts to be resolved prior to leaving Bangkok ACC radar cover.

2.28 The meeting recalled the work that had been conducted in this respect by Thailand, Malaysia and Singapore and reported to the previous task force meeting. Coordination was still ongoing in attempting to accommodate crossing traffic at alternate levels and in reducing reliance on No-PDC procedures. The meeting encouraged the three States to continue this work because the availability of an additional flight level and/or real time coordination would assist greatly in alleviating the problems described by Malaysia.

2.29 IATA suggested that a partial solution may be to introduce minor ATS route alignments in strategic locations to draw some of the traffic away from the convergence points. This proposal has been further discussed in Agenda Item 5.

2.30 The meeting recalled the discussions at previous task force meetings, in which it had been recognized that BOBCAT was not a tactical air traffic management tool and simply provided defined spacing at Kabul FIR entry points. The meeting agreed that it remained the responsibility of air navigation services providers to tactically manage air traffic flows.

#### Singapore Readiness

2.31 Singapore provided an update to the meeting in terms of their readiness to proceed with the operational trial. AIP Supplement 30/06 had been issued on 30 March 2006. Copies of the ATFM Users Handbook and the ANSP Training Guidelines had been distributed to all affected staff and the questions raised by staff in this respect had been answered or returned to the ATFM/TF for consideration. A number of the questions raised by staff had led to amendments to both the Handbook and the Training Guidelines.

2.32 The AIS Office had also been thoroughly briefed in relation to their role in the operational trial. Additionally, all system requirements had been installed at the relevant work areas, including suitable desktop PC equipment for internet access to BOBCAT.

#### Thailand Readiness

2.33 Thailand briefed the meeting in respect of the overall readiness and preparation for the ATFM operational trial, including consideration of the operational units of AEROTHAI who would be involved with BOBCAT ATFM operations. Thailand had prepared all concerned parties to be ready by the specified time frame and had published AIRAC AIP Supplement A 4/06, dated 25 May 2006.

2.34 The operational units that would be involved with BOBCAT operations within Thailand were identified as all ATS Units including AIS, as well as the Air Traffic Flow Management Unit (ATFMU). All areas were now in the final stage of document preparation and training and would be ready to carry out their responsibilities in advance of the ghosting period commencing on 29 June 2006.

2.35 ATFM procedures relating to the Bangkok ACC, Bangkok/Phuket Approach and Tower Control, and regulations and procedures relating to the Bangkok/Phuket AIS Offices had been finalized and training would take place on 19 – 23 June 2006. The following procedures will be incorporated in the training programme for the respective areas;

- a) Interaction with the BOBCAT System;
- b) Departure Arrangements and Coordination;
- c) Procedure for Flight affected by Special Flight Exempted from ATFM;
- d) Missed Wheel-Up Time Procedure and Coordination;
- e) Coordination with the Bangkok ATFMU; and
- f) Contingency Arrangements.

2.36 All the necessary facilities and furnishings had been installed in the Bangkok ATFMU, all systems had been under continuous checking and monitoring over the past 3 months and were ready for trial operations. All the ATFMU Procedures and Documents were completed including Operational Procedures Document, Operational Log, Equipment Outage Log, AFTN Message Formats and Deficiency/Contingency Log.

2.37 The ATFMU staff had completed theoretical as well as on the job training. Additional training with simulated exercises between ANSPs/airline dispatchers and the ATFMU will be completed before ghosting commences. The ATFMU would commence full shift work on 26<sup>th</sup> June 2006 with intensive training and system familiarization to ensure a successful operational trial of BOBCAT.

2.38 Engineers providing maintenance to BOBCAT were already routinely providing this type of service for other operational web-based services used by AEROTHAI. Specific training of these engineers regarding BOBCAT system would be completed over the next two weeks.

### **Agenda Item 3: GO/NO GO Decision**

#### *Safety Assessment Primary Requirements*

3.1 The ATFM/TF/6 meeting (May 2006) had reviewed, updated and accepted the Safety Assessment and associated Hazard Log for the ATFM Operational Trial. As a result of the safety assessment activities and associated works, the ATFM/TF had identified and recorded in the safety assessment the following primary requirements to be met prior to the conduct of the ATFM operational trial.

3.2 Primary Requirements.

- a) Proof of BOBCAT Concept by the conduct of desktop simulations/paper trials;
- b) Preparation and publication of a comprehensive AIP Supplement containing procedures and requirements for the operational trial;
- c) Preparation and publication of comprehensive ATFM Handbook containing procedures and requirements for the operational trial;
- d) Computer based training capabilities via the BOBCAT website;

- e) Adequate ATFMU staffing and equipment levels, including technical support;
- f) Advanced BOBCAT system Hardware and Software requirements including equipment redundancy, firewall protection, etc
- g) Ghosting of operations for 7 day period prior to live trial;
- h) Immediate reversion capability to pre-trial conditions using existing State bi-lateral arrangements; and
- i) Availability of suitable methodology and set of objective criteria against which trial performance could be measured.

3.3 The meeting noted that in terms of assumptions and constraints, the safety assessment recorded the following:

*Assuming the full completion, or planned completion prior to commencement of an operational trial, of the items described above, the ATFM/TF would convene a meeting at a suitable time prior to the scheduled start of the 7 day ghosting period in order to conduct an assessment of the readiness level of trial participants and make a Go/ No Go decision in relation to the commencement, or otherwise, of the ATFM operational trial.*

*In the event of significant non compliance or lack of readiness in relation to the items described [in Section 4] above, commencement of the trial would be delayed until a suitable readiness level was achieved.*

3.4 In considering the primary requirements of the safety assessment, the meeting agreed that the intention of d) above in terms of training had been met because the BOBCAT website had been operational since February 2006 and users had been able to interface on a daily basis with the equipment. In addition, documented Training Guidelines for ANSPs had been prepared and made available via the BOBCAT website.

3.5 In respect to the methodology and set of objective criteria required at i) above against which trial performance could be measured, the meeting noted the progress made during this meeting in this regard and agreed that this work would be able to be finalized in a timely manner.

3.6 As such, the meeting considered that the primary requirements of the safety assessment had been met and, in this respect, the operational trial could proceed.

#### Go/No Go Considerations

3.7 In considering the commencement of the trial, the meeting focused attention on the aspects to be reviewed in making the Go/No Go decision for both the ghosting period preceding the operational trial and the subsequent operational trial.

3.8 Arrangements agreed earlier by the ATFM/TF had been that there would be a 7 day ghosting period followed immediately by the full operational trial i.e. with no break in between. IATA considered that this methodology would mean that there would not be an opportunity in between the ghosting period and the operational trial to review and assess the situation or to address potential issues which could cause disruptions during the operational trial. IATA proposed a break of one week

between the ghosting and operational phases of the trial to enable any remedial actions to be identified and implemented.

3.9 Although recognizing the concerns raised by IATA, the meeting was encouraged by the readiness reports received from the States with primary involvement in the ATFM operations, the availability of operational ATFMU facilities and the high percentage of airlines that had been interacting with the BOBCAT. Provisions had also been included in both the AIP Supplement and trigger NOTAMs under which affected flights departing without slots would only be accommodated after flights with slots had been processed.

3.10 The meeting considered that stopping and restarting the trial would have a more detrimental impact than continuing the ghosting phase whilst conducting daily assessments of trial performance, upgrading from ghosting to the full operational trial when the ongoing assessment indicated that it was appropriate to do so.

*Go to commence ghosting phase*

3.11 Notwithstanding, the meeting agreed that if the ghosting period did not demonstrate an adequate level of performance, there was little to be gained in pushing into the full operational trial. As such, in making a Go decision to commence the ghosting phase on 29 June 2006 as scheduled, the meeting agreed that progression from the ghosting phase to the operational use of BOBCAT would take place only once satisfactory ghosting performance was confirmed by the Core Team of the ATFM/TF.

3.12 In his respect, a teleconference for all members of the Core Team was scheduled on 4 July 2006 at 0600UTC (1300 Bangkok local time). The teleconference would undertake a review of the statistics available from the trial in addition to general reporting of the progress of the ghosting phase. The teleconference of Core Team members would then take a decision to either commence the full operational trial, or continue the ghosting phase for another 5 days before a second review conference. A suitable agenda would be prepared and distributed prior to the meeting to ensure all relevant aspects were addressed.

3.13 In the event that the ghosting phase was continued, a further teleconference of Core Team members would be convened after 5 days to again review the progress of the ghosting phase with the intention of moving to the full operational phase as soon as it was able to be achieved. Ghosting should continue in full conditions until the decision to either proceed to full operational trial or cease the ghosting was made by the Core Team.

3.14 The meeting recognized that in order for maximum benefit to be derived from the ghosting period, it was important that the ghosting operations were as close to the real operations as possible. All parties were encouraged to take all actions necessary to ensure a hi-fidelity ghosting period was achieved. IATA would communicate with airlines to ensure their awareness and support in this respect, and that they continued to lodge additional slot request options over and above their first choice.

*Checklists and Data Collection*

3.15 To assist with the structured assessment of trial performance, the ATFM/TF commenced preparation of a Check List of relevant items to form the basis for assessment of the ghosting period (**Appendix E** refers) and a similar Check List of relevant items to form the basis for the full operational trial (**Appendix F** refers). Checklists would be refined in light of knowledge and experience gained during the trial with the intention of assisting to provide a suitably objective assessment of trial performance.

3.16 Additionally, a comprehensive electronic data collection template was prepared, to be used for both the ghosting and operational phases of the trial. States involved would be required to complete the data sheet on a **daily** basis and submit the information on a **daily** basis to the ATFMU for dissemination amongst Core Team members.

3.17 Similarly, airlines were encouraged to provide data and feedback on a daily basis to the IATA Singapore Office for relay to the ATFMU for onwards dissemination on a daily basis. All data should be prepared in **electronic format**, using the data template and explanatory notes at **Appendices G and H** respectively.

#### **Agenda Item 4: Implementation Management Considerations**

##### *Suspension of Trial Operations*

4.1 The meeting recalled that during ATFM/TF/4 (November 2005), it was agreed that in the event of dramatic difficulties or safety concerns during the live operations, the operational trial could be suspended immediately whilst investigation and remediation was undertaken. However, no formal process had yet been established by the ATFM/TF to be followed should such a circumstance arise.

4.2 The meeting recognized that in suspending the operational trial, at a minimum the following should be considered:

- a) Who should be the authority to suspend the operational trial?
- b) What are the possible scenarios that would be deemed sufficient to suspend the operational trial?
- c) Must the suspension of the operational trial be a unanimous decision by all the participating States, Operators and ICAO, or would a single participating party be able to suspend the operational trial? And in what circumstances?
- d) What would be the coordination process for the suspension of the operational trial?

4.3 The meeting agreed that in the case of a safety matter, it was necessary that reasonable actions be taken by the party first becoming aware of the circumstances. Beyond direct safety considerations, the meeting recognized that considerations of efficiency of operation could be very subjective. It was possible that one party would consider a slowdown in efficiency to be intolerable, whereas another party may view the same circumstance as acceptable. One party may measure a situation as a negative to efficiency and wish to cease the trial, whereas the same situation could be a positive to efficiency to another party and not warrant stopping the trial.

4.4 It was evident that in many circumstances a request to cease the trial would require some sort of value judgment. Accordingly it was appropriate that a full group of Core Team members be involved in such decisions. The meeting agreed that an affected party should contact their Core Team member in the first instance to describe the problems being experienced. That Core Team member would then discuss the matter with the remainder of the Core Team to enable the Core Team to take a collective decision on the matter.

Trigger NOTAMs

4.5 The meeting considered the need for a “trigger” NOTAM in accordance with Annex 15 – *Aeronautical Information Services* and the *Aeronautical Information Services Manual* (Doc 8126), to be issued to commence the trial.

4.6 Annex 15 states that when an AIP Amendment or an AIP Supplement is published in accordance with the AIRAC procedures, a NOTAM shall be originated giving a brief description of its contents, the effective date and the reference number to the amendment or supplement. This NOTAM shall come into force on the same effective date as the amendment or supplement (Annex 15 Chapter 5, paragraph 5.1.1.6 refers). The detailed procedures for issuing a “trigger” NOTAM are contained in the *Aeronautical Information Services Manual* (Doc 8126).

4.7 In light of the magnitude of the planned implementation of ATFM operational trial over the Bay of Bengal, South Asia and Pakistan through Kabul FIR, the meeting considered it essential that affected States issue a trigger NOTAM in accordance with the ICAO procedures referenced above at least 7 days prior to implementation.

4.8 As the meeting had agreed that the ghosting phase of the trial would commence on 29 June 2006 as scheduled, a trigger NOTAM to activate the ghosting phase should be published as soon as possible. Progression from the ghosting phase to the operational use of BOBCAT would take place once satisfactory ghosting performance was confirmed by the Core Team of the ATFM/TF. This was anticipated to occur on or after 6 July 2006 and would require an additional trigger NOTAM to activate the full operational trial.

4.9 Accordingly, the meeting prepared model NOTAM texts (**Appendix I** refers), identified as “NOTAM #1 – Activate Ghosting” and “NOTAM #2 – Activate Operational Trial”, and requested the Regional Office to disseminate this information as soon as possible. The meeting also requested that the model NOTAM texts be displayed on the BOBCAT website.

*Note: State Letter Ref.: T3/8.13.2 – AP055/06 (ATM) dated 20 June 2006 was transmitted by Regional Office in this respect. Thailand transmitted NOTAM A1582/06/ & C3583/06 on 19 June 2006. Singapore transmitted NOTAM A1325/B1327/C1360 on 19 June 2006.*

Non Standard Kabul Entry Point

4.10 The meeting recalled that BOBCAT was configured to consider a number of parameters that had been previously been defined by the task force. These included useable levels and ATS routes for transiting the Kabul FIR, with the entry points associated with these ATS routes being ASLUM (G792/V390), ROSIE (L750), PAVLO (N644) and SITAX (A466). Levels available were CVSM levels 280 to 390 on all routes except in the case of G792/V390, where FL280 was not available.

4.11 Recent information provided to the BOBCAT development team by one airline showed the periodic use of an entry point to the Kabul FIR that was outside the current parameters of BOBCAT. The use of a ‘non-standard’ entry point introduced difficulties for BOBCAT in that the non-standard point was not currently considered by the system.

4.12 Flights using the ‘non-standard’ routing travel an additional 22NM from DI to MURAD compared to aircraft proceeding direct from DI via SITAX to MURAD on A466, introducing an additional 3 minutes flight time. This was a sufficient time increase to impact the spacing with other aircraft being sequenced by BOBCAT.

4.13 The meeting recognized that there were approximately 25 airlines that would be involved in the ATFM Operational Trial and that for BOBCAT to address peculiarities in the operations of each of these airlines was not possible. Taking into consideration the requirements and objectives of the air traffic flow management system for the trial phase, the meeting considered that the airline should be encouraged to submit its ATFM slot requests based on the existing BOBCAT parameters.

4.14 In this example, the airline should submit a slot request based on the SITAX waypoint but include an additional 3 minutes in the EET to SITAX to accommodate the extra 22 miles to be flown. The ATS flight plan filed should show the 'real' route to be flown, but the slot would be based on what was essentially an abeam SITAX position, with the EET to abeam SITAX increased by 3 minutes to allow for the extra track miles to be flown to MURAD.

4.15 Alternatively, a workaround using the LAJAK waypoint was also possible. In this case, the airline should subtract 3 minutes from the 'real' LAJAK EET and then use this reduced EET as the EET to SITAX for BOBCAT purposes. The intention of both methods was to provide an approximate abeam SITAX time that the BOBCAT could use for the sequencing calculations. The matter would be reviewed after the commencement of the operational trial.

4.16 IATA undertook to communicate this decision to the airline involved and the BOBCAT development team would be of assistance in explaining the circumstances to the relevant dispatchers if required.

#### *Airline Dispatch and ANSP Contact Information*

4.17 In addressing communications arrangements between the ATFMU and system users, the meeting recalled that the contact information for the Bangkok ATFMU had been widely circulated in the State AIP Supplements and was available on the BOBCAT website.

4.18 However, it was likely that there would be occasions in which the ATFMU had to initiate contact with a dispatcher or ANSP and therefore contact details for these parties would need to be held at the ATFMU. To facilitate the provision of user contact details to the ATFMU, and additional BOBCAT form (**Appendix J** refers) had been included in the ATFM User Handbook. Participants were encouraged to circulate the form appropriately and return contact details to the ATFMU as soon as possible.

### **Agenda Item 5: Any Other Business**

#### *IATA ATS Route Proposals*

5.1 In recalling the difficulties expressed by Malaysia at paragraphs 2.25 to 2.30 in relation to traffic bunching in the eastern part of the Bay of Bengal and the associated limitations in tactical air traffic management, IATA submitted two ATS route proposals for consideration by the meeting.

5.2 The intention was to relieve the convergence of routes through some minor route realignments, which would provide three separate routings from south of the current conflict points at VPL and PUT.

5.3 The proposed route realignments are described as follows and have been included in **Appendix K:**

- a) Connecting VPG to GIVAL, which will take traffic joining P628 away from VPL, and
- b) Connecting HTY to RAN, which will take traffic joining M770 away from PUT.

5.4 As the route described in a) is within the Kuala Lumpur FIR alone, it would require only internal coordination and agreement to implement the route.

5.5 Apart from alleviating possible traffic conflicts over PUT, connecting HTY to RAN will also make M770 an attractive option for flights downstream through Indian airspace, alleviating the underutilization of M770 reported by India. The route segment proposed is entirely within the Bangkok FIR, thereby also requiring only internal coordination to enable implementation.

5.6 The meeting noted the potential difficulties in respect of the proposal at a) which crossed a group of military restricted areas, however considered that a conditional route usable during the night time hours may have more chance of success in discussions with the Malaysian Defence authorities. Both Malaysia and Thailand agreed to follow up the route proposals and report back to the Task Force and the Regional Office in due course.

India Airspace Capacity Improvements

5.7 India provided a comprehensive update to the meeting in respect of airspace capacity improvements in Indian Airspace after the implementation of new ATS routes and extended Varanasi TMA.

5.8 The lateral jurisdiction of Varanasi TMA had been extended since 22 December 2005 to cover a large portion of airspace south of Varanasi up to KKJ, ASOPO, IBUDO, LAPAN on routes A791, L333, B209, L759 and in the North covering the routes A201, B345 in addition to R460, G590 and other domestic routes. The entire revised TMA is under radar cover.

5.9 Two new conditional ATS routes L509 GAYA- ASARI and M875 KAKID-LAPAN-BUTOP have been implemented since 11 May 2006. These route segments provide two additional independent traffic flows to ASARI prior to entry into Pakistan / Kabul FIR

5.10 Following the implementation of revised Varanasi TMA the traffic flow across the Varanasi and Delhi TMA has improved significantly. Optimum utilisation of airspace capacity and level allocation is being achieved. The following traffic data for a period of one week from 25 December 2005 to 31 December 2005 was collected:

Route	Fix	25/12	26/12	27/12	28/12	29/12	30/12	31/12
R460W/M890/ L759/A466W	SAMAR	30 (17)	33(26)	9(6)	35(22)	31(22)	36(21)	35(19)
B209/L759/L333 R460W/L759/G452W	TIGER	21(10)	13(7)	7(1)	18(9)	27(19)	25(19)	31(16)
P628	VIKIT	10(8)	11(8)	4(4)	10(8)	12(8)	7(5)	10(9)

(Note: Numbers without brackets are movements over 24 hours, numbers within brackets indicate subset of movements between 2000-2300 UTC. Data does not include departures from Delhi)

5.11 Following the implementation of the above 2 new ATS routes described above the flow of traffic has further improved significantly. The following is the traffic data collected for one week from 25 May 2006 to 31 May 2006.



Route	Fix	25/5	26/5	27/5	28/5	29/5	30/5	31/5
R460W/M890/L509/ L759/A466W	SAMAR	40 (18)	42(27)	49(25)	30(20)	49(27)	42(20)	43(24)
B209/L759/L333/ R460W/L759/G452W	TIGER	56(22)	63(23)	46(19)	29(14)	39(14)	46(18)	49(19)
P628	VIKIT	12(6)	14(10)	14(11)	12(9)	5(2)	8(7)	13(10)

(Note: Numbers without brackets are movements over 24 hours, numbers within brackets indicate subset of movements between 2000-2300 UTC. Data does not include departures from Delhi)

- 5.12 Analysis of the May 2006 traffic data resulted in the following observations:
- No aircraft operated on new route M875;
  - On an average 8-10 aircraft operated on new route L509;
  - The traffic distribution on routes L333, L759, G452W and R460W continues to remain equally distributed;
  - Maximum number of traffic during period between 2000-2300Hrs operated through TIGER on routes L759/B209/L333;
  - The traffic on route P628 continues to remain low;
  - All aircraft were accommodated at optimum flight levels F320 and above; and
  - The maximum capacity that utilised during peak one hour period between 2100-2200 hrs is found to be a maximum of 10 aircraft, while the capacity is 18.

5.13 India expected that traffic flows would further improve on implementation of the following new conditional ATS route segments in Pakistan / Kabul FIRs:

- PRA - SERKA(AFGHAN) F460/F280  
Provides extended connectivity to N877 direct to SERKA in Afghanistan airspace.
- BUTOP – DI(PAK) F460/F280  
Provides independent flow for traffic on M770. Traffic converging at SAMAR via M890, A466W will be minimized.

## Agenda Item 6: Future Work

### Work Programme

6.1 The meeting agreed to the following work programme in order to ensure preparedness for the commencement of the ATFM operational trial during July 2006:

Date	Activity	Responsible	Remarks
19 June 2006	Distribute model text for trigger NOTAM, data collection templates and invitation for ATFM/TF/7	Regional Office	Model NOTAM text and data templates prepared during SCM GO BOB ATFM meeting (14-16 June 2006)
19 June 2006	Issue trigger NOTAM	All States including India, Malaysia, Pakistan, Singapore, Thailand	All the states that had issued AIP Supplement
19 June 2006	British Airways A/SITAX plus 3 minutes	IATA	Inform airline regarding use of abeam SITAX plus 3 minutes for slot request
29 June 2006	Commence ghost operations	All	
29 June onwards	Submit daily data sheets to ATFMU for onwards distribution	States – India, Malaysia, Pakistan, Singapore, Thailand.	Data from States to be submitted by 0600UTC daily or earlier
29 June onwards	Obtain daily data from airlines, submit daily to ATFMU for onwards distribution	IATA Singapore Office	Data from airlines to be submitted by 0600UTC daily or earlier
29 June-31 July	Ongoing review of data	All	As per standard data templates
Prior to 4 July	Arrange teleconference facilities to enable teleconference on 4 July	AEROTHAI	
Prior to 4 July	Prepare and distribute draft agenda for teleconference	Chairman, Regional Office, Thailand, IATA	
4 July 2006	Teleconference of Core Team members	Core Team members	0600 UTC on 4 July (1300 Bangkok local time)
On or after 6 July 2006 as decided by Core Team.	Commence ATFM Operational Trial	All	Subject to authorization of Core Team teleconference
31 July – 3 August 2006	ATFM/TF/7 – Four day Trial Review Meeting	ATFM Task Force	Review outcomes of ATFM operational trial

ATFM Task List discontinued

6.2 In reviewing the ATFM Task List, which was originally drafted by the Special Coordination Meeting for the Bay of Bengal area (SCM/BOB) in February 2005, the meeting noted that the task list had last been updated during the ATFM/TF/4 meeting in November 2005.

6.3 The meeting agreed that most of the task list items had been addressed during the work of the ATFM/TF and that, in preparation for the trial, the very focused work programmes shown above had been adopted as the preferred method of working for the task force. Accordingly, there was no need for the task list to be retained as a tool by the task force and the meeting agreed that the use of the task list should be discontinued.

Next Task Force Meeting

6.4 In considering the next meeting of the Task Force, arrangements were agreed for a review of the trial at a full task force meeting as described below. The Regional Office would make the arrangements and issue invitations as soon as possible:

- 31 July-3 August, 2006 ATFM/TF/7 – Review of ATFM Operational Trial.

Chairman's Closing Remarks

6.5 In closing the Special ATS Coordination meeting, the Chairman thanked the participants and their Administrations for their excellent support and contributions, and again acknowledged the special contribution made by AEROTHAI in hosting the meeting.

6.6 Mr. Rigney also took the opportunity to inform the meeting that he would be retiring as Chairman of the ATFM/TF at the conclusion of ATFM/TF/7 on 3<sup>rd</sup> August 2006 and wished everyone involved with the development of BOBCAT every success in the run-up to the commencement of the ghosting period and operational trial.

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## SCM GO BOB ATFM

## Appendix A

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## SCM GO BOB ATFM

## Appendix A

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**LIST OF WORKING PAPERS (WPs) AND INFORMATION PAPERS (IPs)****WORKING PAPERS**

<b>NUMBER</b>	<b>AGENDA</b>	<b>TITLE</b>	<b>PRESENTED BY</b>
WP/1	1	Provisional Agenda	Secretariat
WP/2	4	Trigger NOTAM	Secretariat
WP/3	2	BOBCAT Training Guidelines for Air Navigation Service Providers	Secretariat
WP/4	2	ATFM Users Handbook (Draft Version 2.xx)	Secretariat
WP/5	2	Primary Requirements	Secretariat
WP/6	3	BOBCAT System Development and Improvements since ATFM/TF/6	Thailand
WP/7	2	New Entry Point into Kabul FIR	Thailand
WP/8	2	AEROTHAI Operational Readiness	Thailand
WP/9	2	List of Airlines Participating in BOBCAT Trials	Thailand
WP/10	2	Airline Dispatch and ANSP Contact Information	Thailand
WP/11	2	Review of AIP Supplement	Secretariat
WP/12	2	Singapore's Readiness Issue	Singapore
WP/13	3	IATA's Proposed Process and Checklist of Items in making Go/No Go Decision	IATA
WP/14	4	Limitations to tactical ATS and Traffic Management arising from BOBCAT	Malaysia
WP/15	2	ATFM/TF Task List	Secretariat
WP/16	2	Update on airspace capacity improvements in Indian Airspace after the implementation of new ATS routes and extended Varanasi TMA and India's preparedness	India

**INFORMATION PAPERS**

<b>NUMBER</b>	<b>AGENDA</b>	<b>TITLE</b>	<b>PRESENTED BY</b>
IP/1	-	List of Working Papers (WPs) and Information Papers (IPs)	Secretariat

**FLIMSY**

<b>NUMBER</b>	<b>AGENDA</b>	<b>TITLE</b>	<b>PRESENTED BY</b>
Flimsy/1	4	Conflicting Routes within the Kuala Lumpur FIR impacting on Slot Allocations	IATA

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**BAY OF BENGAL  
AND  
SOUTH ASIA  
AIR TRAFFIC FLOW MANAGEMENT  
HANDBOOK**

**VERSION 1.0**  
16 June 2006

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## Glossary of Terms

Term	Description
ACC	Area Control Centre
ADC	Aerodrome Control
AEROTHAI	Aeronautical Radio of Thailand, Limited
AFTN	Aeronautical Fixed Telecommunications Network
AIP	Aeronautical Information Publication
AIS	Aeronautical Information Services
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
ATFM	Air Traffic Flow Management
ATFM Users Handbook	Bay of Bengal and South Asia ATFM Handbook
ATFMU	Air Traffic Flow Management Unit
ATM	Air Traffic Management
ATS	Air Traffic Services
ATT	Additional Taxi Time
AWUT	Allocated Wheels-Up Time
BOBCAT	Bay of Bengal Cooperative Air Traffic Flow Management Advisory System
CHG	Change Message
CNL	Cancel Message
CSRT	Contingency Slot Request Template
DEP	Departure Message
DLA	Delay Message
EET	Estimated Elapsed Time
ETD	Estimated Time of Departure
FIR	Flight Information Region
FL	Flight Level
FPL	Flight Plan Message
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICAO PANS ATM	ICAO Procedures for Air Navigation Services: Air Traffic Management
MAD	Maximum Acceptable Delay

NOTAM	Notice to Airmen
PIC	Pilot in Command
PSR	Past Slot Request
SMC	Surface Movement Control
SRT	Slot Request Template
STT	Standard Taxi Time
TWR	Control Tower
WUT	Wheels Up Time

## 1. Introduction

### Purpose and Scope

- 1.1. As per ICAO Annex 11 Chapter 3.7.5, an ATFM service shall be implemented for airspace where air traffic demand at times exceeds or is expected to exceed the declared capacity of the air traffic services concerned.
- 1.2. Further, Annex 11 recommends that an ATFM service should be implemented on the basis of a regional air navigation agreement or through a multilateral agreement, which should make provision for common procedures.
- 1.3. Doc 4444 (PANS-ATM) Chapter 3.2.1.5 states that *“Detailed procedures governing the provision of the ATFM measures, and service within a region or area should be prescribed in a regional ATFM manual or handbook”*.
- 1.4. Accordingly, the purpose of this Handbook is to provide in one document, the procedures for the operation of the Bay of Bengal and South Asia ATFM service, which have been developed through the effective use of Collaborative Decision Making between the States, ICAO Asia and Pacific Regional Office and airspace users concerned.

### Objectives of Air Traffic Flow Management (ATFM)

- 1.5. Air Navigation Service Providers (ANSPs) concerned, ICAO Asia Pacific Regional Office, and the International Air Transport Association (IATA) considered that there was a need to introduce an automated air traffic flow management system, due to present flight level constraints at the Kabul FIR gateway points together with the limited number of route segments through the Kabul FIR. This would ensure a smooth flow of traffic through Kabul waypoints and associated route segments.
- 1.6. The objectives of ATFM across the Bay of Bengal and South Asia are:
- a) To enhance and facilitate the orderly and efficient flow of air traffic across the Bay of Bengal and South Asia;
  - b) To minimize ground and enroute delays;
  - c) To maximize capacity and optimize the flow of air traffic within the area;
  - d) To plan for and manage future ATS workload in the light of forecast increased traffic flow within the area; and
  - e) To assess the economic and environmental impact of the implementation of the ATFM system.

1.7. The Bay of Bengal Cooperative ATFM Advisory System (BOBCAT) has been developed by Aeronautical Radio of Thailand Ltd. (AEROTHAI), in coordination with ICAO Asia Pacific Regional Office, affected Air Navigation Service Providers (ANSPs) concerned, the International Air Transport Association (IATA) and their member international airlines to assist in managing the present restrictions for westbound aircraft operating through the Kabul FIR during the busy night time period.

#### ATFM Users Handbook

1.8. This *Bay of Bengal and South Asia ATFM Handbook* (ATFM Users Handbook) provides information necessary for airline operators and ANSPs to carry out their responsibilities within the BOBCAT system. The AFTM Users Handbook will be updated as BOBCAT functionalities are enhanced.

#### Principles of BOBCAT

1.9. The following principles have been agreed to:

- a) To introduce an automated air traffic flow management system in accordance with ICAO standards and recommended practices to enhance the smooth flow of westbound aircraft transiting the Kabul FIR during the period of 2000 to 2359UTC;
- b) BOBCAT provides advisory information only. ANSPs retain responsibility for tactical ATS and traffic management;
- c) BOBCAT will manage mandatory slot selection through interaction with airline dispatchers via the Internet using a dedicated website;
- d) To maintain or improve aircraft operations through the Kabul FIR during the above period;
- e) To maintain a high level of responsiveness to requests from ANSPs, IATA and their airline operators for procedure and system improvements; and,
- f) To provide reports and statistics on ATFM operations for analysis.

#### References

1.10. The following documents are referred to within this handbook:

- a) Annex 11 Air Traffic Services;
- b) Doc 4444 Procedures for Air Navigation Services – Air Traffic Management;
- c) Doc 9673 Basic Air Navigation Plan – Asia and Pacific Regions;

- d) Doc 9750 Global Air Navigation Plan for CNS/ATM Systems;  
and,
- e) Doc 9426 ATS Planning Manual

Control of the Manual

1.11. This Handbook is controlled, edited and produced by the ICAO BBACG Air Traffic Flow Management Task Force, which operates under the auspices of the ICAO Bay of Bengal ATS Coordination Group (BBACG).

1.12. The Editor for the Bay of Bengal and South Asia ATFM Handbook is:

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Validity

1.13. The date of application of this Edition number 1.0 is 16 June 2006 and this manual shall not be used operationally before that date.

Changes to the ATFM Handbook

1.14. The ATFM Handbook will usually be updated once per year. However intervening amendments may be issued in conjunction with relevant State AIC and AIP documents.

1.15. Whenever a user identifies a need for a change to this Handbook, a Request for Change Form (RFC) should be completed and submitted to the Editor. A copy of the RFC Form is shown at Appendix A.

Version / Amendment Number	Date	Amended by	Comments
1.0	16 June 2006	ATFM/TF	The original version



## **2. BOBCAT Operations and Functionality**

### BOBCAT System

2.1 The BOBCAT will be responsible for the ATFM activities within the Bay of Bengal and South Asia areas for the routes and at the times described in States' AIP Supplements. This responsibility will be managed by the Bangkok Air Traffic Flow Management Unit (ATFMU) in coordination with aircraft operators and ANSPs in the FIRs concerned.

### BOBCAT Concept of Operations

2.2 The BOBCAT concept of operations has been formulated based on the following parameters:

- a) BOBCAT shall ensure slot allocations at the same flight level are not less than the agreed required spacing at each Kabul FIR entry waypoints: SITAX (A466), PAVLO (N644), ROSIE (L750) and ASLUM (G792);
- b) In order to efficiently utilize airspace with regard to aircraft diverting over Dhera Ismail Khan (DI) on A466 and N644, airline operators should indicate their CVSM flight level for entry into Kabul FIR at the DI waypoint;
- c) Spacing requirements between two aircraft at the same waypoint into Kabul FIR and the same flight level shall be 10 minutes;
- d) An additional buffer time will be applied within the system to ensure flexibility as well as efficient and safe flow of traffic operating through the Kabul FIR;
- e) In order to ensure availability of an initial slot for westbound departures from Northern India and Pakistan, departures from these airports will be given priority at flight level 280 for entry into Kabul FIR. Conversely, aircraft departing from other airports with longer flight times will given priority at flight levels 310-390 for entry into Kabul FIR;
- f) Allocated Wheel-Up Time (AWUT) assigned by BOBCAT is based on information derived from the airline operators and ANSPs' input. This time should be based on Estimated Time of Departure (ETD), individual aerodromes' Standard Taxi Time (STT) provided by ANSPs, and any additional time that aircraft operator considers necessary (Additional Taxi Time - ATT);
- g) Aircraft sequencing at the departure airport according to AWUT order will be managed by the ANSP concerned;

- h) ANSP should endeavor to assist aircraft operators in order for them to meet the required AWUT;
- i) Airline operators should submit ATS flight plan based on BOBCAT slot allocation for entry into Kabul FIR;
- j) It is the airline operators' responsibility to arrange en route flight profile to arrive over the Kabul FIR entry waypoint as allocated by BOBCAT;
- k) It is an ANSP responsibility to tactically manage aircraft entry into the Kabul FIR in accordance with the assigned route and flight level;

### Bangkok Air Traffic Flow Management Unit

2.3 Bangkok Air Traffic Flow Management Unit (Bangkok ATFMU), located in Bangkok ACC, has responsibility to manage the BOBCAT system on behalf of ANSPs and aircraft operators concerned. The ATFMU will operate for westbound flights operating through the Kabul FIR during night time period.

### Area of Operation

2.4 All Westbound flights intending to transit the Kabul FIR on ATS routes A466, L750, N644 between FL280 to FL390 inclusive and G792/V390 between FL310 to FL390 inclusive between 2000UTC and 2359UTC daily shall participate in the BOBCAT system. These flights are required to submit slot allocation requests to the ATFMU for processing.

### ANSP and aircraft operators system requirement

2.5 Aircraft Operators and ANSPs are required to have computer equipment capable of connecting to the BOBCAT website <https://www.bobcat.aero> via the Internet satisfying the following minimum requirements:

- a) A Personal Computer of any operating system with the following characteristics:
  - ii) Processor: minimum CPU clock speed of 150 MHz
  - iii) Operating System: Any that operates one of the following web browsers (i.e. Windows 2000/XP, Linux, Unix, or Mac OS)
  - iv) RAM: 64 MB or larger (depending on operating system),
  - v) Hard disk Space: minimum of 500 MB or larger (depending on operating system)
  - vi) Monitor Display Resolution: Minimum of 800 x 600 pixels
  - vii) Web Browser: Internet Explorer 5.5 or newer, Mozilla 1.0 or newer, Mozilla Firefox 1.0 or newer, Netscape 7 or newer,

- b) Internet Connection: 56 Kbps Modem or faster Internet connection.
- c) Printer if required (e.g. printing out information for distribution to concerned persons).

### BOBCAT Operating Procedures

2.6 Westbound flights intending to transit the Kabul FIR on ATS routes A466, L750, N644 between FL280 to FL390 inclusive and G792/V390 between FL310 to FL390 inclusive between 2000UTC and 2359UTC daily shall participate in ATFM.

#### *Application of System Spacing*

2.7 BOBCAT is designed to arrange 10-minute spacing plus a buffer time for entry into the Kabul FIR.

#### *Wheels-Up Time*

2.8 Wheels Up Time will be calculated based on information submitted by airline operators using an aircraft's ETD + ANSP-provided STT for specific departure aerodrome + Additional Time if required by the operator. It is defined as:

WUT = ETD + STT + Additional Time required by the operator

#### *Allocated Wheels-Up Time*

2.9 Allocated Wheels-Up Time (AWUT) is the adjusted WUT calculated by BOBCAT and issued to an aircraft based on submitted entry time into Kabul FIR.

#### *Slot Allocation Process*

2.10 The slot allocation process is divided into 3 phases, namely the Slot request, initial Slot allocation and finally Slot distribution to airline operators and ANSPs. All operators concerned are required to submit slot requests to the BOBCAT system by logging onto <https://www.bobcat.aero> and completing the electronic templates provided.

#### *Slot Request Procedures*

2.11 Slot requests including preferred ATS route, flight level and Maximum Acceptable Delay (MAD) should be lodged by the cut-off time of 1200 UTC. Submitted slot requests may be amended at any time up until 1200UTC. To enhance opportunities for preferred slot allocation, airline dispatchers are encouraged to submit additional options in case their first choice is not available. This may include alternative route, flight level and changes to MAD.

2.12 As BOBCAT will allocate FL280 on a priority basis to facilitate departures from northern India and Pakistan underneath over-flying traffic, dispatchers are encouraged to include FL280 in at least one slot request for departures from these airports. This should not discourage airline dispatchers who are requesting a slot from other airports to also submit FL280 as one of their requests, especially during the busiest period of 2100 – 2300UTC.

2.13 Flights that were not allocated a slot although a slot request was submitted prior to the cut-off time (1200UTC) and flights who did not submit slot request by the cut-off time, will have the opportunity to select a slot from the unallocated slots after the slot distribution has been completed.

#### *Slot Allocation Procedures*

2.14 Slot allocation shall take place after the cut-off time at 1200UTC. BOBCAT will process and generate the slot allocation based on the information submitted in the slot request, and notify the results not later than 1300UTC via e-mail and the BOBCAT website to concerned parties.

2.15 Flights departing without an allocated slot will be tactically accommodated after participating flights have been processed and should expect delays for requested routes and altitudes.

2.16 The ATFMU will continue to be staffed until 2359UTC, during which time aircraft operators can:

- a) View the slot allocation result for flight planning purposes;
- b) Cancel the assigned slot; and/or,
- c) Request a change of slot allocation to another available slot in the published list.

2.17 ANSPs can view the slot allocation results at <https://www.bobcat.aero/>.

2.18 Once aircraft operators are satisfied with the slot allocation, they should submit their ATS flight plan using the route and level parameters of the allocated slot.

2.19 In addition to normal addressees, operators should also address flight plan and related ATS messages (e.g. FPL, DLA, CNL, CHG) to the ATFMU via AFTN address VTBBZDZX.

#### *Vacant Slot Selection After Cut-off Time*

2.20 Airline operators will be able to log into BOBCAT website at <https://www.bobcat.aero/> to select slot allocation from vacant slot. The procedure of selecting slot after cut-off time is posted in the “Help” section of the website.

### *Cancellation or Change of Slot Allocation*

2.21 Airline operators will be able to log into BOBCAT website at <https://www.bobcat.aero/> to change or cancel slot allocation. The procedure of cancelling and modifying slot allocation is posted in the “Help” section of the website.

### *Viewing Available Slots*

2.22 Airline operators will be able to log into BOBCAT website at <https://www.bobcat.aero/> to view available slot. The procedure for viewing available slots is posted in the “Help” section of the website.

### *Pilot in Command Role and Responsibility*

2.23 In accordance with ICAO PANS ATM provisions (Section 7.8), it is the responsibility of the Pilot in Command (PIC) and the operator to ensure that the aircraft is ready to taxi in time to meet any required departure time.

2.24 PIC shall be kept informed via their operators of the Allocated Wheels Up Time (AWUT), gateway fix times and flight parameters (route/level) nominated by BOBCAT.

2.25 In collaboration with airline operators, ANSPs shall ensure that every opportunity and assistance is granted to an aircraft to meet AWUT and allocated waypoint times.

2.26 The PIC shall include the AWUT in the ATC clearance request.

2.27 The PIC shall arrange take-off as close as possible to the AWUT.

2.28 PIC shall adjust cruise flight to comply with slot time at Kabul FIR gateway fix, providing advice to ATC of speed and estimate variations in accordance with normal AIP requirements.

### *Missing the Allocated Wheels-Up Time*

2.29 In circumstances where it becomes obvious that the AWUT will not be met, a new slot allocation should be obtained by the most expeditious means (e.g. via coordination between flight dispatcher/ANSPs and ATFMU).

2.30 In order to assist coordination in this respect the following steps should be followed, insofar as they are applicable to the particular situation:

- a) PIC to inform ANSP of their revised estimate at the allocated gate waypoint

- b) ANSP will contact and inform ATFMU of the revised estimate.
- c) ATFMU will give two options to the ANSP for consideration by the PIC:
  - i) First option will be same route and the same requested flight level with the revised estimate for the waypoint or with delay to the revised estimate.
  - ii) Second option will be same route and a different flight level with the revised estimate for the waypoint or with delay to the revised estimate.
- d) PIC shall contact their dispatcher to obtain a new slot allocation from ATFMU if the two options are not acceptable to them.
- e) In order to alleviate tactical workload on ANSPs, PIC should coordinate using airline company arrangements (e.g. dispatchers) to the maximum extent possible, particularly in relation to delays of significant duration.

#### *Operations of Special Flights Exempted from ATFM*

2.31 The following flights are exempted from ATFM slot allocation:

- a) Humanitarian or medical flights; or,
- b) State aircraft with Head of State onboard.

2.32 Flights exempted from ATFM shall indicate the exemption in their flight plan (Field 18 – STS-ATFM EXMP).

2.33 ANSPs shall forward the flight plan information to the ATFMU.

2.34 Flights affected by special flight exempted from ATFM shall follow the same procedure as if the aircraft has missed the AWUT.

#### BOBCAT Username/Password Allocation and Security Policy

##### *BOBCAT Username/Password Allocation*

2.35 All concerned parties requiring access to BOBCAT are required to submit a written username/password request to Bangkok ATFMU, on the BOBCAT Username / Contact Information Modification Form included in **Appendix B**, signed by authorized personnel of the organization as well as the organization seal.

2.36 The username/password request should include the following information:

- a) User's Full Name;
- b) User's E-Mail address; and,
- c) User's proposed username.

2.37 Each organization with users participating in BOBCAT system should maintain uniqueness of BOBCAT usernames within their organization. BOBCAT will then put suffix of organization name after each username to ensure that a BOBCAT user's username is unique.

2.38 If a particular airline operator is using the services of another airline's dispatch office, they shall submit an official letter to the Bangkok ATFMU informing them that this airline or dispatch organization has authority to submit slot request on their behalf. This formal letter shall be signed by an authorized person on the company's letterhead.

2.39 If there are any changes to users participating in BOBCAT, each participating organization is responsible to notify Bangkok ATFMU of the change so as to ensure access security for the system.

#### *BOBCAT Security Policy*

2.40 For the purpose of maintaining access security of BOBCAT, each user of the system is required to have a username/password, which should not be shared with others. Action taken under a username/password will be interpreted as action taken by the registered user.

2.41 To provide security for BOBCAT users, BOBCAT only stores the digest of the password to be verified against password provided by BOBCAT users. Each generated password will only be known to the BOBCAT user alone via e-mail.

2.42 Each BOBCAT user is responsible for maintaining personal password only known by the user alone. It is recommended that the password be regularly changed to protect against identity theft.

2.43 In the event of a lost BOBCAT username/password, contact should be made with Bangkok ATFMU to request a password reset. The reset password would then be sent to the registered user via e-mail. The user is responsible for changing the generated password into the personal password.

2.44 To protect against identity theft issues, users should logout of BOBCAT website once the task related to BOBCAT system is completed.

### 3. Bangkok ATFMU

#### ATFMU Staffing and Hours of Operation

3.1 The Bangkok ATFMU will operate from 0600UTC to 2400UTC daily for westbound flights only, with contact details as follows:

- a) Telephone : +662 287 8024, +662 287 8025
- b) Tel/Fax: +662 287 8026
- c) Fax : +662 287 8027
- d) ATFN: VTBBZDZX
- e) E-mail: atfm@bobcat.aero

#### ATFMU Functions and Responsibilities

3.2 Bangkok ATFMU has the following functions and responsibilities:

- a) Manage operation of BOBCAT system so as to ensure that proper slot requests were submitted to the system, slot allocations are completed properly and processes after initial slot allocation are completed in a timely manner;
- b) Coordinate with airline operators and ANSPs involved in BOBCAT operations with respect to:
  - i. Requesting username/password into BOBCAT system;
  - ii. Submitting slot request;
  - iii. Obtaining slot allocation for aircraft missing wheels-up time.



## 4. Airline Dispatchers and Private Operators

### Submitting a Slot Request to BOBCAT

4.1 Slot requests including preferred ATS route, flight level and Maximum Acceptable Delay (MAD) should be lodged by the cut-off time of 1200 UTC. Submitted slot requests may be amended at any time up until 1200UTC. To enhance opportunity for preferred slot allocation, airline dispatchers are encouraged to submit additional options in case their first choice is not available. This may include alternative route, flight level and changes to MAD.

### Use of Multiple Slot Request Options

4.2 Airline dispatchers are alerted that more slot request options (routes and flight level) submitted generally increase the potential that a flight would be allocated a slot based on the requests submitted.

### Use of Estimated Elapsed Time

4.3 BOBCAT calculates Estimated Time over Kabul FIR entry waypoint based on Estimated Elapsed Time (EET) provided by airline operators in the ATS Flight Plan and the Wheels-Up Time. Airline operators are reminded that BOBCAT slot allocation is only accurate up to the precision of EET provided by airline operators.

### Use of Standard Buffer Time

4.4 A standard buffer time of will be applied for entry into Kabul FIR. For example, aircraft allocated slot into Kabul FIR at 2100UTC can arrive at the waypoint up to the buffer time being nominated.

### Use of Standard Taxi Time and Additional Time Required

4.5 Standard Taxi Time suggested by ANSPs at the departing airport will be used to compute Wheels-Up Time of an aircraft. Additional Time required by aircraft operator can also be added for Taxi purposes.

### Calculation of Wheels-up Time (WUT)

4.6 Wheels-Up Time will be automatically calculated by BOBCAT user interface based on the following equation:

$$WUT = ETD + STT + \text{Additional Time Required by Operator}$$

### Procedures if No Slot Allocated or Missing Cut-off Time

4.7 Flights that were not allocated a slot although a slot request was submitted prior to the cut-off time (1200UTC) and flights which did not submit slot request by the cut-off time, will have the opportunity to select a slot from

the unallocated slots after the slot distribution has been completed. The procedures for such operations are posted in BOBCAT Website under the "Help" section.

#### Use of Slot Request Templates (SRT) and Past Slot Request (PSR)

4.8 Airline operators will have the opportunity to save a slot request into a slot request template (SRT) with a name of their choice. This slot request template can be used to submit a slot request for a flight of a later date, or a slot request of a similar flight on the same date.

4.9 Furthermore, airline operators will have the facility to view slot requests submitted on previous days and use a Past Slot Request as template for the current day's operation.

#### Use of Contingency Slot Request Templates (CSRTs)

4.10 In addition to reducing workload with respect to slot request submission, the Slot Request Template feature can also be useful where airline operators are unable to reach the BOBCAT website, e.g. the airline operators' Internet connection is down. In this case, they should advise the Bangkok ATFMU of the problem, select the appropriate Contingency Slot Request Template (CSRT) forms which are shown in **Appendix C and D**, and transmit the information to the Bangkok ATFMU via fax.

4.11 Accordingly, airline operators are requested to store up-to-date Slot Request Templates corresponding to all scheduled flights in another location outside of the BOBCAT website.

## 5. Air Navigation Service Providers (ANSPs)

### General ANSP Roles and Responsibilities

- 5.1 AWUT shall be included as part of the ATC clearance.
- 5.2 When requested by the PIC prior to push back, or if the aircraft has pushed back, ANSPs shall assist the PIC to coordinate for a new slot allocation with the ATFMU in the event that the aircraft is unable to meet the AWUT.
- 5.3 ANSPs shall notify specific Standard Taxi Time (STT) for the individual departure airports and any subsequent changes, e.g. taxi way works, to the ATFMU as guidance for airline operators in estimating WUT.
- 5.4 ANSPs shall notify Bangkok ATFMU of any change required in the spacing at specific waypoint within their area of responsibility.
- 5.5 The ATFMU (AFTN Address: VTBBZDZX) shall be included in the list of AFTN addressees for NOTAMs regarding any planned activities relevant to BOBCAT operations (e.g. reservation of airspace/closure of airspace, non-availability of routes, etc).
- 5.6 The ATFMU (AFTN Address: VTBBZDZX) shall be included in the list of AFTN addressees for ATS messages (e.g. FPL, DLA, DEP, CHG, CNL) related to flights participating in the ATFM operational trial.

### Control Tower/ACC Responsibilities – Departure Airport

#### *Standard Push-back and Taxi Time*

- 5.7 ADC/SMC at departure airports are responsible for providing Bangkok ATFMU with representative time between the time an aircraft pushes back and the wheels-up time of the aircraft during the period of BOBCAT operation.

#### *Priority Take-off for Aircraft Subjected to ATFM*

- 5.8 In accordance with ICAO PANS ATM procedures (Section 7.8), flights with slot allocation should be given priority for takeoff over other departures to facilitate compliance with AWUT.

#### *Procedures if aircraft unable to make AWUT*

- 5.9 In circumstances where it becomes obvious that the AWUT will not be met, a new slot allocation should be obtained by the most expeditious means (e.g. via coordination between PIC/flight dispatcher/ANSPs and ATFMU).

5.10 In the case where the delay is expected to be no more than 5 minutes past the slot window, there maybe an opportunity to tactically manage the aircraft to avoid a new slot allocation as long as it will not interfere with another aircraft's slot at the Kabul FIR entry point. This will ultimately depend on close coordination between Tower, ACC and PIC.

5.11 Where the expected delay will be more than 5 minutes, the PIC will contact ATC with the expected delay, any other pertinent information and request a new slot. The TWR controller shall immediately contact his respective ACC and request a revised slot allocation based on the PIC information. ACC shall then coordinate with ATFMU, obtain a new slot allocation and pass the information to the PIC via the TWR.

5.12 The PIC has the choice of the following:

- a) Choosing from alternates provided by ANSPs in co-ordination with Bangkok ATFMU, or;
- b) Contacting airline operator's office to lodge a new slot allocation.

#### ACC Responsibilities – En Route

##### *Coordination with Pilot In Command (PIC)*

5.13 En Route ACCs should manage the transit of aircraft with BOBCAT slot allocation so that these aircraft would be in a position to make their slot allocation into the Kabul FIR.

##### *Coordination between En Route ACCs*

5.14 In circumstances where it becomes obvious that the allocated slot into Kabul FIR cannot be met, the en route ACC first becoming aware would:

- a) Advise the PIC of the situation; and
- b) Manage the traffic tactically

5.15 In these circumstances, the appropriate en route ACC should file ATFM System Fault and Event Report Form in **Appendix E** and submit to Bangkok ATFMU by fax or e-mail.

## AIS Responsibilities – Departure Airports

### *Coordination with Airline Operators and the Bangkok ATFMU*

5.16 The AIS office is responsible for coordinating with Bangkok ATFMU to assist in obtaining a slot allocation for airline operators who do not have access to the BOBCAT website.

5.17 The AIS office shall ensure that an airline operator proposing to submit a flight plan for a flight entering the Kabul FIR during the BOBCAT time period has a slot allocation.

5.18 The AIS office shall provide a BOBCAT Slot Request form to the airline operator who proposes to enter the Kabul FIR during the hours of BOBCAT operations. Once completed, this form shall be submitted by the AIS office on behalf of the airline operator to the Bangkok ATFMU for processing. The slot request form is shown at **Appendix F**.

5.19 In the case of an AIS office that has access to the BOBCAT website, the aircraft's slot allocation result may be viewed and used by the airline operator to complete his ATS flight plan.

5.20 With regard to an AIS office which is unable to access the BOBCAT website, the Bangkok ATFMU shall transmit the aircraft's slot allocation result to the AIS office by fax or other means. This information shall be relayed to the airline operator by the AIS office to allow an ATS flight plan to be filed.

5.21 The AIS office shall also ensure that, when the flight plan is finally completed by the airline operator, it is based on the BOBCAT slot allocation with reference to the Estimated Elapsed Time (EET) from departure airport to the Kabul FIR entry point as well as the ATS Route and Flight Level entering the Kabul FIR before transmission by AFTN.

5.22 In the circumstances that the airline operator submits slot request prior to the cutoff time, the following steps should be undertaken by the airline operators:

- a) The airline operator shall contact the AIS office to obtain the result of his slot allocation request. If satisfied, submit a flight plan using the slot allocation result; or,
- b) Otherwise, request a new slot allocation through the AIS office.

5.23 The Bangkok ATFMU (AFTN Address: VTBBZDZX) shall be included in the list of AFTN addressees for ATS messages (e.g. FPL, DLA, DEP, CHG and CNL) related to affected flights.

## 6. Contingency Arrangements

### Airspace Contingencies

6.1 In the event of closure of ATS routes, flight levels or other airspace that occurs prior to the cut off time for BOBCAT slot allocation and which may affect BOBCAT operations, Bangkok ATFMU should be notified as soon as possible. In turn, Bangkok ATFMU will pass on this information to airline dispatchers to re-file slot request on routes or flight levels which are not affected. Other ANSPs will also be advised by Bangkok ATFMU of this situation.

6.2 In circumstance where closure of ATS routes or airspace as referred to in paragraph 6.1 above occurs after the slot allocation cutoff time, the following procedures are applicable:

- a) If aircraft are already airborne, ANSPs will tactically manage these flights based on spare slot allocations en route as well as obtaining slots for them through the Kabul FIR in coordination with PIC to avoid diversions; or,
- b) If aircraft have not yet departed, new slot allocations will be coordinated between Bangkok ATFMU and dispatchers for flights that would be affected by the closure.

6.3 Extreme weather conditions, e.g. cyclonic conditions, affecting international airspace may cause en-route diversion or cause airlines not to plan on routes affected by the extreme weather conditions. In this situation, ANSPs may also elect to increase longitudinal spacing between affected aircraft.

6.4 In the event of extreme weather conditions affecting ATFM operations, ANSPs would need to tactically manage these flights, including diversions. In doing so, coordination with Bangkok ATFMU should be considered if it will affect aircraft which are not yet airborne.

6.5 In the case of flights which have not yet departed, dispatchers should re-file on alternative routings wherever possible.

### Reduction in Airspace Capacity due to Other Reasons

6.6 In circumstances where an ANSP is required to increase the longitudinal spacing between aircraft, e.g. sudden loss of staff, degradation in facilities, etc., the ANSP affected would normally take NOTAM action regarding the event as well as contacting Bangkok ATFMU with details and the resultant effect on BOBCAT operations. Bangkok ATFMU would coordinate with all concerned advising them of any changes which would affect BOBCAT operation.

6.7 ANSP responsible for areas affected by any contingency for an

area or areas which may affect normal BOBCAT operations shall notify Bangkok ATFMU of the contingency and possible consequences to aircraft as soon as possible, so appropriate action and coordination can be taken.

#### Communication Issues

6.8 In the event that an airline operator or an ANSP is unable to access the BOBCAT website, the following means of communication with Bangkok ATFMU shall be used:

- a) Telephone : +662 287 8024, +662 287 8025
- b) Tel/Fax: +662 287 8026
- c) Fax : +662 287 8027
- d) ATFN: VTBBZDZX

6.9 In the event that an ACC is unable to log onto the BOBCAT website, the Bangkok ATFMU, on being advised, will send a copy of the slot allocation results to the affected ACC ensuring that:

- a) For departure airports, AWUTs are sorted the correct order;
- b) For en-route ACCs, appropriate Kabul entry waypoint(s) are selected and aircraft allocations are sorted in the correct order of ETO with Flight Level;

#### Complete Failure of BOBCAT System

6.10 In the event of a complete failure of the BOBCAT system, Bangkok ATFMU shall notify all parties concerned and advise that ATFM procedures are suspended. In this event, procedures will be applied by States concerned in accordance with bi-lateral agreements.

#### Suspension of ATFM Operational Trial

6.11 In the case of an evident safety issue, reasonable actions to manage the situation, including the suspension of the ATFM operational trial, should be taken by the party first becoming aware of the circumstances.

6.12 Beyond direct safety considerations, it is possible that a request to stop the ATFM operational trial could be subjective and require some sort of value judgment. Accordingly, such a request should be relayed to the appropriate member of the Core Team of the Air Traffic Flow Management Task Force for initial consideration and, if the request was supported, further relayed to the remaining members of the Core Team in order to enable appropriate consideration of the matter. After consideration, the decision of the Core Team would be promulgated.

## Non-Completion of Flight

6.13 In circumstances where an aircraft aborts his flight en route and either diverts or returns for various reasons, this information should be transmitted to Bangkok ATFMU so that his original slot allocation for entry into the Kabul FIR can be cancelled and made available for use by other aircraft.

## **7. System Fault and Event Report**

7.1 An ATFM system fault is defined as a significant occurrence affecting an ATS unit, an aircraft operator or ATFMU resulting from the application of ATFM procedures.

7.2 Aircraft operators and ATC units experiencing an ATFM system fault should complete an ATFM System Fault and Event Report Form from the ATFM Users Handbook (see **Appendix E**) and forward it to the ATFMU at the address indicated on the form. The ATFMU will analyze all reports, make recommendations/suggestions as appropriate and provide feedback to the parties concerned to enable remedial action.





## ATFM USERS HANDBOOK REQUEST FOR CHANGE FORM

To be submitted to Bangkok ATFMU

### SECTION I: NATURE OF CHANGE

1. Subject: \_\_\_\_\_

2. Reason of Change: \_\_\_\_\_

3. Description: \_\_\_\_\_

4. References: \_\_\_\_\_

Reference sections/paragraphs related to the change as well related documents.

### SECTION II: INFORMATION OF PARTY INITIATING CHANGE

Organization: \_\_\_\_\_

Full Name: \_\_\_\_\_

Tel: \_\_\_\_\_ Date of Request: \_\_\_\_\_

E-Mail: \_\_\_\_\_ Signature: \_\_\_\_\_

### SECTION III: CONSULTATION

Response due date: \_\_\_\_\_

Organization / Administration	Contact Person Name	Agreement (Agree/Disagree)	Date

### SECTION IV: FEEDBACK

Action(s) Required: \_\_\_\_\_

Feedback Passed: \_\_\_\_\_ Editor: \_\_\_\_\_

RFC Number: \_\_\_\_\_ Date Received: \_\_\_\_\_



## USERNAME / CONTACT INFORMATION MODIFICATION FORM

To be submitted to Bangkok ATFMU

### SECTION I: ADD NEW USERS

Prefix	First Name	Last Name	Proposed Username Up to 20 characters	E-Mail Address

### SECTION II: REMOVE USERS

Prefix	First Name	Last Name	Username	E-Mail Address

### SECTION III: RESET PASSWORD

Prefix	First Name	Last Name	Username

### SECTION IV: NOTIFICATION E-MAIL ADDRESS

Change our organization's notification e-mail address to \_\_\_\_\_

### SECTION V: CONTACT INFORMATION

Organization: \_\_\_\_\_

Full Name: \_\_\_\_\_

Tel: \_\_\_\_\_

Signature: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Date/Time of Request: \_\_\_\_\_



## CONTINGENCY SLOT REQUEST TEMPLATE FORM A

To be submitted to Bangkok ATFMU

### SECTION I: AIRCRAFT DETAIL

Call Sign: \_\_\_\_\_

Registration: \_\_\_\_\_

Departure Aerodrome: \_\_\_\_\_

Departure Date: \_\_\_\_\_

Destination Aerodrome: \_\_\_\_\_

ETD (hhmm): \_\_\_\_\_

Aircraft Type: \_\_\_\_\_

Estimated Taxiing Time (minutes): \_\_\_\_\_

Estimated time between taxi and wheels up

### SECTION II: ROUTE/FLIGHT LEVEL OPTIONS

Option No.	ETD (UTC)	MAD (Maximum Acceptable Delay)	WP1	EET1	FL1	WP2	EET2	FL2
1, 2, 3, ...	hhmm	Minute(s)	DI	hhmm	390	SITAX	hhmm	390
			DI		390	SITAX		390
			DI		350	SITAX		350
			DI		310	SITAX		310
			DI		280	SITAX		280
Option No.	ETD (UTC)	MAD (Maximum Acceptable Delay)	WP1	EET1	FL1	WP2	EET2	FL2
			DI		390	PAVLO		390
			DI		350	PAVLO		350
			DI		310	PAVLO		310
			DI		280	PAVLO		280
Option No.	ETD (UTC)	MAD (Maximum Acceptable Delay)	WP1	EET1	FL1			
			ROSIE		390			
			ROSIE		350			
			ROSIE		310			
			ROSIE		280			
Option No.	ETD (UTC)	MAD (Maximum Acceptable Delay)	WP1	EET1	FL1			
			ASLUM		390			
			ASLUM		350			
			ASLUM		310			

### SECTION III: CONTACT INFORMATION

Organization: \_\_\_\_\_

Full Name: \_\_\_\_\_

Tel: \_\_\_\_\_

Signature: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Date/Time of Request: \_\_\_\_\_



**Bangkok Air Traffic Flow Management Unit (Bangkok ATFMU)**

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+66-2-287-8025

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E-Mail: [atfmu@bobcat.aero](mailto:atfmu@bobcat.aero)

AFTN: VTBBZDZX

## **CONTINGENCY SLOT REQUEST TEMPLATE FORM B**

To be submitted to Bangkok ATFMU based on previously saved Slot Request Template

### **SECTION I: AIRCRAFT DETAIL**

Call Sign: \_\_\_\_\_

Registration: \_\_\_\_\_

Departure Aerodrome: \_\_\_\_\_

Departure Date: \_\_\_\_\_

Destination Aerodrome: \_\_\_\_\_

ETD (hhmm): \_\_\_\_\_

Aircraft Type: \_\_\_\_\_

Estimated Taxiing Time (minutes): \_\_\_\_\_

Estimated time between taxi and wheels up

### **SECTION II: ROUTE/FLIGHT LEVEL OPTIONS**

1. Slot Request Template Name: \_\_\_\_\_  
Name of Slot Request Template which will be used to submit slot request

2. Changes from Slot Request Template Detail:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### **SECTION III: CONTACT INFORMATION**

Organization: \_\_\_\_\_

Full Name: \_\_\_\_\_

Tel: \_\_\_\_\_

Signature: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Date/Time of Request: \_\_\_\_\_



## **ATFM SYSTEM FAULT AND EVENT REPORT FORM**

To be submitted to Bangkok ATFMU

### **SECTION I – GENERAL INFORMATION**

1. Date and Time (UTC) of Occurrence      /      /      /      /       
yy / mm / dd / hh / mm
2. Type of Event
  - 2.1 Failure of BOBCAT system
  - 2.2 Communication Link failure
  - 2.3 Non compliance with ATFM procedures by Pilot / Airline Operator / ANSP
  - 2.4 Error in FPL and associated messages
  - 2.5 Failure in ATFM Slot Monitoring (i.e. TWR at Aerodrome of Departure)
  - 2.6 Non compliance with slot allocation window
3. Restrictions applicable to the flight: \_\_\_\_\_

### **SECTION II – DETAILED INFORMATION**

1. Organization / Administration submitting the report: \_\_\_\_\_
2. Flight Data (if applicable) – Call Sign: \_\_\_\_\_

Attach copies of Flight Progress Strips indicating DEP, EOBT, WUT, DES or Entry Point & ETO over entry point, FL to ATC Unit/Sector area of activity as applicable.
3. Other details necessary for analysis of the incident  
Attach copies of FPL or RPL, subsequent ATS modifying messages etc. if appropriate  
\_\_\_\_\_

### **SECTION III – SUPPLEMENTARY INFORMATION**

1. Actions already initiated: \_\_\_\_\_  
\_\_\_\_\_
2. Contact information follow-up action:
  - 2.1 Name: \_\_\_\_\_
  - 2.2 Designation: \_\_\_\_\_
  - 2.3 Tel: \_\_\_\_\_
  - 2.4 E-Mail: \_\_\_\_\_
3. Signature: \_\_\_\_\_
4. Date/Time of Report: \_\_\_\_\_



## SLOT REQUEST FORM

To be submitted to Bangkok ATFMU

### SECTION I: AIRCRAFT DETAIL

Call Sign: \_\_\_\_\_

Registration: \_\_\_\_\_

Departure Aerodrome: \_\_\_\_\_

Departure Date: \_\_\_\_\_

Destination Aerodrome: \_\_\_\_\_

ETD (hhmm): \_\_\_\_\_

Aircraft Type: \_\_\_\_\_

Estimated Taxiing Time (minutes): \_\_\_\_\_

Estimated time between taxi and wheels up

### SECTION II: ROUTE/FLIGHT LEVEL OPTIONS

Option No.	ETD (UTC)	MAD (Maximum Acceptable Delay)	WP1	EET1	FL1	WP2	EET2	FL2
1, 2, 3, ...	hhmm	Minute(s)	DI	hhmm	390	SITAX	hhmm	390
			DI		390	SITAX		390
			DI		350	SITAX		350
			DI		310	SITAX		310
			DI		280	SITAX		280
Option No.	ETD (UTC)	MAD (Maximum Acceptable Delay)	WP1	EET1	FL1	WP2	EET2	FL2
			DI		390	PAVLO		390
			DI		350	PAVLO		350
			DI		310	PAVLO		310
			DI		280	PAVLO		280
Option No.	ETD (UTC)	MAD (Maximum Acceptable Delay)	WP1	EET1	FL1			
			ROSIE		390			
			ROSIE		350			
			ROSIE		310			
			ROSIE		280			
Option No.	ETD (UTC)	MAD (Maximum Acceptable Delay)	WP1	EET1	FL1			
			ASLUM		390			
			ASLUM		350			
			ASLUM		310			

### SECTION III: CONTACT INFORMATION

Organization: \_\_\_\_\_

Full Name: \_\_\_\_\_

Tel: \_\_\_\_\_

Signature: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Date/Time of Request: \_\_\_\_\_



**Bangkok Air Traffic Flow Management Unit (Bangkok ATFMU)**

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E-Mail: [atfmu@bobcat.aero](mailto:atfmu@bobcat.aero)

AFTN: VTBBZDZX

## ORGANIZATIONAL CONTACT INFORMATION FORM

To be submitted to Bangkok ATFMU

### ORGANIZATION CONTACT INFORMATION

Organization Name: \_\_\_\_\_

Organizational Unit Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Tel: \_\_\_\_\_

AFTN: \_\_\_\_\_

Fax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date of Submission: \_\_\_\_\_

**BAY OF BENGAL  
COOPERATIVE ATFM ADVISORY  
SYSTEM**



**TRAINING GUIDELINES FOR  
AIR NAVIGATION SERVICE  
PROVIDERS**

**VERSION 1.0  
16 June 2006**



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## 1. Introduction

### Purpose of the Training Guidelines

1.1 The purpose of this guideline is to assist ANSPs to achieve their responsibilities in managing aircraft involved in the BOBCAT program from pre-departure to into the Kabul FIR.

### General

1.2 It is proposed that States of the ICAO Asia/Pacific Region within the Bay of Bengal, South Asia and Pakistan airspace will implement an operational trial of an integrated Bay of Bengal Cooperative Air Traffic Flow Management System (BOBCAT) commencing on 6 July 2006. The trial will be conducted under the auspices of the ICAO Bay of Bengal ATS Coordination Group – ATFM Task Force. The ATFM operational trial will be preceded by a 7 day ghosting period commencing on 29 June 2006.

1.3 The ATFM service is advisory in nature and will be provided by Aeronautical Radio of Thailand LTD (AEROTHAI) from the Bangkok Air Traffic Flow Management Unit (ATFMU).

1.4 The ATFMU will utilize the BOBCAT system in exercising its responsibility for the ATFM activities within the Bay of Bengal and South Asia areas for the ATS routes, flight levels for westbound aircraft entering the Kabul FIR between 2000 to 2359UTC daily. This responsibility will be managed in coordination with aircraft operators and ANSPs in the FIRs concerned.

1.5 The ATFM service will be limited to slot allocation/management for westbound flights transiting the Kabul FIR. The objectives of the ATFM services are to:

- a) Reduce ground and en-route delays;
- b) Maximize capacity and optimize the flow of air traffic entering the Kabul FIR;
- c) Provide an informed choice of routing and flight level selection;
- d) Alleviate unplanned in-flight rerouting and technical stops; and,
- e) Assist regional Air Navigation Service Providers (ANSPs) in planning and managing future workload in the light of forecast increases of traffic flows within the area.

1.6 The operational trial will manage westbound flights transiting the Kabul FIR at specified times by satisfying minimum spacing requirements at established gateway fix points in the vicinity of the eastern boundary of the Kabul FIR.

1.7 Mandatory slot allocation will be managed via internet access to the automated BOBCAT system of the Bangkok ATFMU.

1.8 BOBCAT will provide advisory ATFM information only. ANSPs continue to retain responsibility for tactical ATS and traffic management.

1.9 The ATFMU will operate from 0600UTC to 2359UTC daily and will be responsible for westbound flights only. The Bangkok ATFMU may be contacted as follows:

Website: <https://www.bobcat.aero/>  
Telephone: +66-2-287-8024, +66-2-287-8025  
Fax: +66-2-287-8027  
Tel/Fax: +66-2-287-8026  
E-mail: [atfm@bobcat.aero](mailto:atfm@bobcat.aero)  
AFTN: VTBBZDZX

## **2. Identification of ATS routes, flight levels and applicable hours**

2.1 All westbound flights intending to transit the Kabul FIR between 2000UTC and 2359UTC daily on ATS routes A466, L750, N644 from FL280 to FL390 inclusive and V390/G792 from FL310 to FL390 inclusive shall participate in the operational trials of BOBCAT.

2.2 In order to ensure availability of an initial slot for westbound departures from designated airports in northern India and Pakistan, (currently identified as VIDP, OPKC and OPLA), FL280 has been reserved in BOBCAT for priority allocation to departures from these airports.

2.3 Aircraft departing from airports east of India will have priority for FL310 to FL390.

2.4 Notwithstanding priorities mentioned in paragraph 2.2 and 2.3 above, aircraft may submit slot requests for any of the available levels to enter the Kabul FIR mentioned in paragraph 2.1 above.

### **3. BOBCAT Operating Procedures**

#### *Slot Allocation Process*

3.1 The slot allocation process is divided into 3 phases, namely the Slot request, initial Slot allocation and finally Slot distribution to airline operators and ANSPs. All operators concerned are required to submit slot requests to the BOBCAT system by logging onto <https://www.bobcat.aero/> and completing the electronic templates provided.

#### *Slot Requests*

3.2 Slot requests including preferred ATS route, flight level and Maximum Acceptable Delay (MAD) should be lodged between 0001 UTC and 1200 UTC on the day of operation. Slot requests may subsequently be amended up until 1200 UTC, which shall be the cut-off time. To enhance opportunities of preferred slot allocation, airline dispatchers are encouraged to submit additional options in case their first choice is not available. This may include alternative route, flight level and changes to MAD.

3.3 As BOBCAT will allocate FL280 on a priority basis to facilitate departures from northern India and Pakistan, dispatchers responsible for submitting slot request for these aircraft are encouraged to include FL280 as one of the option in their slot request.

3.4 Flights that were not allocated a slot although a slot request was submitted prior to the cut-off time (1200UTC), and flights that did not submit a slot request by the cut off-time, should select a slot from the listing of unallocated slots available immediately after slot distribution has been completed.

#### *Slot Allocation*

3.5 Slot allocation will take place shortly after the cut-off time at 1200UTC. BOBCAT will process and generate the slot allocation based on the information submitted in the slot request.

#### *Slot Distribution*

3.6 Notification of results will be distributed via the BOBCAT website "Slot Allocation" page not later than 1300UTC. In cases where the recipient has difficulties in receiving this information on the website, alternative arrangements for notification of slot allocation (e.g. E-mail, Fax, and Telephone) should be coordinated with the ATFMU.

3.7 Flights departing without an allocated slot will tactically be accommodated after participating flights have been processed and may expect delays for requested routes and flight levels.

3.8 After the slot allocation has been published at <https://www.bobcat.aero/>, aircraft operators may:

- a) View the slot allocation result for flight planning purposes;
- b) Cancel the assigned slot; and/or,
- c) Request a change of slot allocation to another available slot by viewing available slot and selecting their preferred option.

3.9 ANSPs may view the slot allocation results at <https://www.bobcat.aero> by selecting Slot Allocation page.

3.10 Once aircraft operators are satisfied with the slot allocation, they should submit their ATS flight plan using the time, route and level parameters of the allocated slot.

3.11 In addition the ATFMU (VTBBZDZX) shall be included in the list of AFTN addressees for ATS messages (e.g. DEP, DLA, CHG and CNL) related to flights participating in the BOBCAT program.

#### Pilot in Command – Role and Responsibilities

3.12 In accordance with ICAO PANS ATM provisions, it is the responsibility of the Pilot in Command (PIC) and the operator to ensure that the aircraft is ready to taxi in time to meet AWUT window. The PIC shall be kept informed via their dispatcher of any changes to the Allocated Wheels Up Time (AWUT), Kabul FIR gateway fix(es) times and flight parameters (route/level) allocated by BOBCAT.

3.13 The PIC shall include the AWUT in the initial ATC clearance request.

3.14 The PIC, in collaboration with ATC, shall arrange take-off as close as possible to the AWUT.

3.15 PIC shall adjust cruise flight to comply with slot time at Kabul FIR gateway fix, providing advice to ATC of speed and estimate variations in accordance with normal AIP requirements.

3.16 In circumstances where it becomes obvious that the AWUT and the allocated slot time in Kabul FIR gateway fix will not be met, a new slot allocation should be obtained by the most expeditious means (e.g. via coordination between flight dispatcher, PIC, ATC and ATFMU).

#### ANSP – Role and Responsibilities

3.17 In accordance with ICAO PANS ATM provisions, flights with an ATFM slot allocation should be given priority for take off over other departures to facilitate compliance with AWUT.

3.18 AWUT shall be included as part of the initial ATC clearance.

3.19 In collaboration with airline operators, ATC shall ensure that every opportunity and assistance is granted to a flight to meet AWUT and allocated Kabul FIR gateway(s) times.

3.20 When requested by the PIC prior to push back or if for some other reason after push-back, there is some delay which would cause the aircraft to miss the AWUT and eventually the Kabul Entry waypoint slot time, ATC shall assist the PIC by coordinating with the ATFMU for a new slot allocation.

3.21 As guidance for airline operators in estimating WUT, ANSPs shall notify ATFMU of Standard Taxi Time (STT) for their departure aerodromes. Any additional temporary changes, e.g. taxi way works etc, which will affect STT, would be also notified to the ATFMU.

3.22 The ATFMU (VTBBZDZX) shall be included in the list of AFTN addressees for NOTAMs regarding any planned activities that could affect slot allocation (e.g. reservation of airspace/closure of airspace, non-availability of routes, etc).

#### Management of AWUT and Flow Buffer

3.23 The management of flights subject to ATFM in the departure phase is critical to the overall success of the ATFM operation. Therefore, flight subjected to ATFM during departure should be given priority in obtaining their AWUT ahead of other departing aircraft in accordance with ICAO ATM-PANS (ATFM section) provisions.

3.24 Control Tower staff should be aware of fundamental issues to ensure the success of a smooth transition from pushback to takeoff for these aircraft. These items include:

- a) Time aircraft calls for pushback;
- b) Time aircraft commences taxiing; and,
- c) The use of Standard Taxi Time (SST) from commencement of pushback to the runway threshold.

3.25 It should be noted that in interpreting AWUT and Allocated ETO at Kabul entry waypoints, an aircraft may depart within reasonable buffer time of the AWUT without any required coordination. Such buffer time to the AWUT must not compromise adherence to the allocated slot time at the Kabul entry waypoint.

3.26 The Control Tower should monitor the progress of aircraft prior to pushback request in order to assist as necessary if a short delay occurs.

3.27 In the event that an aircraft is likely to depart outside its AWUT, the control tower may consider the following options:

- a) When an aircraft is ready to depart before the AWUT, the aircraft could be allowed to depart provided the PIC advises that the aircraft can arrive at the Kabul FIR entry waypoint within the allocated slot time;
- b) When an aircraft departure is minimally delayed and missed the AWUT, the aircraft could be allowed to depart provided that the PIC reported the aircraft will be able to arrive at the Kabul FIR entry waypoint within the allocated slot time;
- c) In any event, this procedure should not jeopardize the following aircraft's slot allocation for entry into the Kabul FIR; and,
- d) When an aircraft could not meet its AWUT and reports that it would not be able to arrive at Kabul FIR entry waypoint within the allocated slot time, a new slot allocation shall be obtained from Bangkok ATMFU.

3.28 The departing ACC concerned should be advised of any delay or time gained resulting from deviation from AWUT, so that they may be able to assist with different control techniques (track shortening/lengthening, increase/decrease of Mach No.) for the aircraft to make up or lose time to meet the allocated slot time at the Kabul FIR entry waypoint.

3.29 With regard to paragraph 3.26 and 3.27, these procedures should not jeopardize the given slot allocation of other aircraft's for entry into the Kabul FIR.

*Missing the Allocated Wheels-Up Time*

3.30 In circumstances where it becomes obvious that the AWUT will not be met, a new slot allocation should be obtained by the most expeditious means (e.g. via coordination between flight dispatcher/ANSPs and ATFMU).

3.31 In order to assist coordination in this respect the following steps should be followed, insofar as they are applicable to the particular situation:

- a) PIC to inform ANSP of their revised estimate at the allocated gate waypoint
- b) ANSP will contact and inform ATFMU of the revised estimate.
- c) ATFMU will give two options to the ANSP for consideration by the PIC:



- i) First option will be same route and the same requested flight level with the revised estimate for the waypoint or with delay to the revised estimate.
  - ii) Second option will be same route and a different flight level with the revised estimate for the waypoint or with delay to the revised estimate.
- d) PIC shall contact their dispatcher to obtain a new slot allocation from ATFMU if the two options are not acceptable to them.
- e) In order to alleviate tactical workload on ANSPs, PIC should coordinate using airline company arrangements (e.g. dispatchers) to the maximum extent possible, particularly in relation to delays of significant duration.

#### **4. Procedures for Special Flights Exempted from ATFM**

4.1 The following flights are exempted from ATFM slot allocation:

- a) Humanitarian or medical flights; or,
- b) State aircraft with Head of State on board.

4.2 Flights exempted from ATFM shall indicate the exemption in their flight plan (Field 18 – STS-ATFM EXMP).

4.3 AIS offices concerned shall forward the flight plan information to the ATFMU (at AFTN: VTBBZDZX).

#### **Flight affected by Special flight e.g. VIP movement**

4.4 BOBCAT will provide advisory ATFM information only.

4.5 ANSPs retain responsibility for tactical ATS and traffic management during this period.

4.6 At the departure aerodrome, where necessary to do so, ATC shall assist the affected flight(s) by coordinating with ATFMU for a new AWUT.

4.7 Flights with slot allocations which may be affected by the exempted aircraft during the en-route phase should be tactically managed by ANSP(s) concerned.

## 5. Interaction between ANSPs and the BOBCAT system

5.1 Only authorized personnel are permitted to logon to the BOBCAT website. A designated person within the administration is responsible for submitting notification of the new nominee on the application form provided and submitting this form to the Bangkok ATFMU by fax or email.

5.2 ANSPs may view the slot allocation results page and customize the screen to suit functional requirements of each position with respect to airspace characteristics or working environment, etc. For example:

- a) Departure aerodrome may choose to view only departure traffic from specific airport or airports, showing AWUT information;
- b) Area control (e.g. Lahore ACC) may wish to view ETO at Kabul FIR entry waypoints as well as DI or;
- c) ACC involved with departure airport(s) may also choose to view departure information (AWUT) from the aerodrome(s) involved as well as Kabul FIR entry waypoints.

5.3 Customizations mentioned in Para. 5.2 can be saved in "Preference" section of the BOBCAT website. Detailed instruction of how to save these preferences may be found in "Help Pages" part of "Documents" section of the BOBCAT website.

5.4 ANSPs are recommended to log into the BOBCAT website as soon as possible after the cut off time and monitor any subsequent changes made by airline operators.

### Coordination Requirements Between Units Within an ANSP

5.5 This sub-section looks at proposed coordination arrangements between the ACC(s), Control Tower(s) and the AIS Office operated within a single ANSP. These procedures may vary at different locations depending on what BOBCAT facilities are available in each unit.

5.6 Where the Control Tower does not have the benefit of viewing BOBCAT slot allocation results, the ACC is responsible to ensure that information of AWUT is distributed to the control tower in the correct order to assist them in managing aircraft subjected to ATFM.

### Coordination Between ACC and Control Tower

5.7 The ACC and Control Tower should arrange internal coordination procedures for distribution of Slot Allocation Result information to the Control Tower.

5.8 The ACC shall forward any updated ATFM information relevant to the concerned aerodrome to the Control Tower as soon as possible.

5.9 ANSPs responsible for departure aerodrome(s) may designate an ATS unit as a point of contact for any relevant ATFMU activities affecting the Control Tower e.g. missed wheel-up time coordination and new AWUT assignment provided by the Bangkok ATFMU. These coordination procedures should be introduced to ensure information is passed effectively to the aircraft involved. (See AIP)

5.10 In the event that, an aircraft departs slightly outside the given slot time, the Control Tower shall notify the ACC, so that assistance may be provided to the aircraft to enable him to make up or lose time to make its designated Kabul Entry time.

#### *En-Route ACCs*

5.11 En-Route ACCs should give all possible assistance to flights subjected to ATFM in order to meet their Kabul entry waypoint time and flight level.

5.12 Lahore ACC should arrange flights to be at the Flight Level allocated by BOBCAT at the Kabul entry waypoint. An alternative Flight Level may also be used depending on the traffic situation.

## 6. AIS Office Involvement in BOBCAT

6.1 The AIS office is responsible for coordinating with Bangkok ATFMU to assist in obtaining a slot allocation for airline operators who do not have access to the BOBCAT website.

6.2 The AIS office shall ensure that an airline operator proposing to submit a flight plan for a flight entering the Kabul FIR between 2000 and 2359UTC has a slot allocation.

6.3 The AIS office shall provide a BOBCAT Slot Request form to airline operators who propose to enter the Kabul FIR during the hours of BOBCAT operations. Once completed, this form shall be submitted by the AIS office on behalf of the airline operator to the Bangkok ATFMU for processing. The slot request form is shown at **Appendix F** of the ATFM Users Handbook.

6.4 In the case of an AIS office that has access to the BOBCAT website, the aircraft's slot allocation result may be viewed and used by the airline operator to complete his ATS flight plan.

6.5 With regard to an AIS office which is unable to access the BOBCAT website, the Bangkok ATFMU shall transmit the aircraft's slot allocation result to the AIS office by fax or other means. This information shall be relayed to the airline operator by the AIS office to allow an ATS flight plan to be filed.

6.6 The AIS Office shall also ensure that when the flight plan is completed by the airline operator, it is based on the BOBCAT slot allocation with reference to the estimated elapsed time (EET) from departure airport to the Kabul FIR entry point as well as the ATS route and flight level entering the Kabul FIR.

6.7 In the circumstances that the airline operator submits slot request prior to the cutoff time, the following steps should be undertaken by the airline operators:

- a) The airline operator shall contact the AIS office to obtain the result of his slot allocation request. If satisfied, submit a flight plan using the slot allocation result; or,
- b) Otherwise, request a new slot allocation through the AIS office.

6.8 The Bangkok ATFMU (AFTN Address: VTBBZDZX) shall be included in the list of AFTN addressees for ATS messages (e.g. FPL, DLA, DEP, CHG, CNL) related to affected flights.

## 7. Contingency Procedures

### Airspace Contingencies

7.1 In the event of closure of ATS routes, flight levels or other airspace that occurs prior to the cut off time for BOBCAT slot allocation and which may affect BOBCAT operations, Bangkok ATFMU should be notified as soon as possible. In turn, Bangkok ATFMU will pass on this information to airline dispatchers to re-file slot request on routes or flight levels which are not affected. Other ANSPs will also be advised by Bangkok ATFMU of this situation.

7.2 In circumstance where closure of ATS routes or airspace as referred to in paragraph 7.1 above occurs after the slot allocation cutoff time, the following procedures are applicable:

- a) If aircraft are already airborne, ANSPs will tactically manage these flights based on spare slot allocations en route as well as obtaining slots for them through the Kabul FIR in coordination with PIC to avoid diversions; or,
- b) If aircraft have not yet departed, new slot allocations will be coordinated between Bangkok ATFMU and dispatchers for flights that would be affected by the closure.

7.3 Extreme weather conditions, e.g. cyclonic conditions, affecting international airspace may cause en-route diversion or cause airlines not to plan on routes affected by the extreme weather conditions. In this situation, ANSPs may also elect to increase longitudinal spacing between affected aircraft.

7.4 In the event of extreme weather conditions affecting ATFM operations, ANSPs would need to tactically manage these flights, including diversions. In doing so, coordination with Bangkok ATFMU should be considered if it will affect aircraft which are not yet airborne.

7.5 In the case of flights which have not yet departed, dispatchers should re-file on alternative routings wherever possible.

7.6 Under conditions mentioned in Para 7.5, this will increase the amount of aircraft on routes not affected by the weather condition, which may cause more departure delays. Airline dispatchers should consider using alternative routing through Kabul FIR so that it will lessen the delay in slot allocation through Kabul FIR. In this case, it is suggested that judicious use of all available routes and flight levels through the Kabul FIR be applied to reduce excessive delays.

### Reduction in Airspace Capacity due to Other Reasons

7.7 In circumstances where an ANSP is required to increase the longitudinal spacing between aircraft, e.g. sudden loss of staff, degradation in facilities, etc., the ANSP affected would normally take NOTAM action regarding the event as well as contacting Bangkok ATFMU with details and the resultant effect on BOBCAT operations. Bangkok ATFMU would coordinate with all concerned advising them of any changes which would affect BOBCAT operation.

7.8 ANSP responsible for areas affected by any contingency for an area or areas which may affect normal BOBCAT operations shall notify Bangkok ATFMU of the contingency and possible consequences to aircraft as soon as possible, so appropriate action and coordination can be taken.

### Communication Issues

7.9 In the event that an ANSP is unable to access the BOBCAT website, the following means of communication with Bangkok ATFMU shall be used;

- a) Telephone: +66-2-287-8024, +66-2-287-8025
- b) Fax : +66-2-287-8027
- c) Tel/Fax: +66-2-287-8026
- d) AFTN : VTBBZDZX

7.10 In the event that an ACC is unable to log onto the BOBCAT website, the Bangkok ATFMU, on being advised, will send a copy of the slot allocation results to the affected ACC ensuring that:

- a) For departure airports, AWUTs are sorted the correct order;
- b) For en-route ACCs, appropriate Kabul entry waypoint(s) are selected and aircraft allocations are sorted in the correct order of ETO with Flight Level;

### Complete Failure of BOBCAT System

7.11 In the event of a complete failure of the BOBCAT system, the Bangkok ATFMU shall notify all parties concerned and advise that ATFM slot allocation procedures are suspended until further notice. Procedures will be applied by States concerned in accordance with existing bi-lateral agreements.

### Non-Completion of Flight

7.12 In circumstances where an aircraft aborts his flight en route and either diverts or returns for various reasons, this information should be transmitted to Bangkok ATFMU so that his original slot allocation for entry into the Kabul FIR can be cancelled and made available for use by other aircraft.

### Suspension of ATFM Operational Trial

7.13 In the case of an evident safety issue, reasonable actions to manage the situation, including the suspension of the ATFM operational trial, should be taken by the party first becoming aware of the circumstances.

7.14 Beyond direct safety considerations, it is possible that a request to stop the ATFM operational trial could be subjective and require some sort of value judgment. Accordingly, such a request should be relayed to the appropriate member of the Core Team of the Air Traffic Flow Management Task Force for initial consideration and, if the request was supported, further relayed to the remaining members of the Core Team in order to enable appropriate consideration of the matter. After consideration, the decision of the Core Team would be promulgated.

## **8. System Fault and Event Report**

8.1 An ATFM system fault is defined as a significant occurrence affecting an ATS unit, an aircraft operator or ATFMU resulting from the application of ATFM procedures.

8.2 Aircraft operators and ATC units experiencing an ATFM system fault should complete an ATFM System Fault and Event Report Form from the ATFM Users Handbook as **Appendix E** and forward it to the ATFMU at the address indicated on the form. The ATFMU will analyze all reports, make recommendations/suggestions as appropriate and provide feedback to the parties concerned to enable remedial action.



**CHECKLIST - GHOSTING PHASE**

<b>Sn</b>	<b>Requirements</b>	<b>Yes</b>	<b>No</b>	<b>Action By</b>	<b>Remarks</b>
<b>1.0</b>	<b>ATFM System Readiness</b>			<b>BOBCAT</b>	
1.1	Are system tests completed satisfactorily?				
1.2	Are the communications /interface links tested and ready?				
1.3	Are ATFMU staff trained on Standard Operating procedures?				
1.4	Has the system been tested to ensure its robustness?				
1.5	Are the system/ATFMU contingency plans in place?				
1.6	Do the results indicate system readiness?				
1.7	Does the system work as designed?				
<b>2.0</b>	<b>Readiness of airlines</b>			<b>AIRLINES</b>	
2.1	Is the information to airlines complete?				
2.2	Are the airlines able to successfully use the system?				
2.3	Have they completed their training of despatch and flight planning personnel?				

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2.4	Are they familiar with the procedures for obtaining slots in case of missing their wheels up time?				
<b>3.0</b>	<b>Readiness of ANSPs (Departure aerodromes)</b>			<b>ANSPs</b>	
3.1	Are ANSPs at Departure aerodromes able to use the system effectively?				
3.2	Are the procedures issued?				
3.3	Has the training on ATFM system and procedures been completed?				
3.4	Are there established procedures for obtaining slots in the case of aircraft unable to depart on the allocated WUT?				
3.5	Are they familiar with the contingency procedures pertaining to system failure, route closures, weather & other natural phenomena affecting normal operations?				
3.6	Has the AIP Supplement been issued? If not, how have they kept the departing airlines from their airports informed?				
3.7	Were there problems with interface with the ATFMU and slot allocations?				
<b>4.0</b>	<b>Readiness of ANSPs (Enroute)</b>			<b>ANSPs</b>	
4.1	Are enroute ANSPs able to provide effective tactical control of traffic operating under ATFM slot allocations?				

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4.2	Is Kabul ACC familiar with the ATFM process and requirements?				
<b>5.0</b>	<b>Contingency procedures for ANSPs and Airlines</b>			<b>AIRLINES ANSPs</b>	
5.1	Have they been published ?				
5.2	Are ANSPs familiar with the procedures				
<b>6</b>	<b>AIP Supplements/Notams</b>				
6.1	Have all the States sending departures into the AFTM area issued the AIP Supplements? If not, what are the steps taken to mitigate this?				
<b>7</b>	<b>Benchmarking by ANSP (Individual Airports)</b>			<b>ANSP</b>	
7.1	Did the Ghosting phase show a reduction in the number of flights delayed in comparison with the actual flow? Are the number of flights delayed reduced?				
7.2	Are the duration of delays reduced?				
7.3	Are there workload issues? How are they addressed?				

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<b>8</b>	<b>Benchmarking by airlines (Individual Airlines)</b>			<b>AIRLINES</b>	
8.1	Are there more on time departures?				
8.2	Are the duration of delays reduced?				
8.3	Are the enroute re-routes reduced or eliminated?				
8.4	Are the delays more predictable? (Is there forewarning of delays, are delays better managed?)				
<b>9</b>	<b>Overall Assessment Slot allocation</b>			<b>Task Force BOBCAT AIRLINES ANSP</b>	
9.1	Are slots distributed equitably?				
9.2	Are some airlines penalised more than others?				
9.3	Are some airports penalised more than others?				

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Appendix E

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<b>10</b>	<b>Flight planned levels (Overall Assessment )</b>			<b>Task Force BOBCAT AIRLINES ANSP</b>	
10.1	Are more flights getting flight planned levels based on BOBCAT solutions, in comparison with pre-ATFM periods?				
<b>11</b>	<b>Assessment by the Task Force</b>			<b>Task Force</b>	
11.1	Did at least 85% of flights thru Kabul Airspace participate in the ghosting period?				
11.2	Is the Task Force satisfied that the statistics indicate the likely improvement in delays, and flight level allocations, after scrutinising the one week data collected.				
11.3	Is the Task Force satisfied that any remedial action required can be executed in time for a successful operational trial				

-----End -----

**Suggested ATFM/TF Targets for consideration**

1. ANSPs for departure aerodromes report encountering no major problems during the trial.
2. ANSPs for enroute segments report no major problems during the trial in providing tactical control and coordination with ATFMU and other ACCs
3. 95% of all flights thru Kabul from all departure aerodromes are subject to ATFM procedures
4. All relevant States have published the appropriate AIPs
5. The Task Force is satisfied that the statistics collected during the operational trial show improved delay situation, delays are more predictable, FL availability, and alleviation of reroutes.

**CHECKLIST - OPERATIONAL TRIAL**

<b>Sn</b>	<b>Requirements</b>	<b>Yes</b>	<b>No</b>	<b>Action By</b>	<b>Remarks</b>
<b>1.0</b>	<b>ATFM System Readiness</b>			<b>BOBCAT</b>	
1.1	Did the system perform satisfactorily during the ghosting period?				
1.2	Did the communications /interface links work according to expectations?				
1.3	Did the ATFMU staff experience any difficulty in applying the Standard Operating procedures?				
1.4	Did the system experience a down time during the ghosting period?				
1.5	Are the system/ATFMU contingency plans in place?				
1.6	Did the results of the ghosting period indicate system readiness? (No problems encountered with slot allocations and interface with users)				
1.7	Did the system work as designed?				

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<b>2.0</b>	<b>Readiness of airlines</b>			<b>AIRLINES</b>	
2.1	Did the airlines find the published information and instructions adequate?				
2.2	Did the airlines have difficulty in using the system effectively?				
2.3	Do the airline despatch and flight planning personnel need further training?				
2.4	Are they familiar with the procedures for obtaining slots in case of missing their wheels up time?				
<b>3.0</b>	<b>Readiness of ANSPs (Departure aerodromes)</b>			<b>ANSPs</b>	
3.1	Did the ANSPs at Departure aerodromes have difficulty in using the system effectively?				
3.2	Did they find the standard operating procedures adequate?				
3.3	Do they require further training on ATFM system and procedures to be proficient?				
3.4	Are there established procedures for obtaining slots in the case of aircraft unable to depart on the allocated WUT?				



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3.5	Are they familiar with the contingency procedures pertaining to system failure, route closures, weather & other natural phenomena affecting normal operations?				
3.6	Has the AIP Supplement been issued? If not, how have they kept the departing airlines from their airports informed?				
3.7	Were there problems with interface with the ATFMU and slot allocations?				
<b>4.0</b>	<b>Readiness of ANSPs (Enroute)</b>			<b>ANSPs</b>	
4.1	Are enroute ANSPs able to provide effective tactical control of traffic operating under ATFM slot allocations?				
4.2	Is Kabul ACC familiar with the ATFM process and requirements?				
<b>5.0</b>	<b>Contingency procedures for ANSPs and Airlines</b>			<b>AIRLINES ANSPs</b>	
5.1	Have they been published ?				
5.2	Are ANSPs familiar with the procedures				
<b>6</b>	<b>AIP Supplements/Notams</b>				
6.1	Have all the States sending departures into the AFTM area issued the AIP Supplements. If not, what are the steps taken to mitigate this.				

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<b>7</b>	<b>Benchmarking by ANSP (Individual Airports)</b>			<b>ANSP</b>	
7.1	Did the operational trial data show a reduction in the number of flights delayed, in comparison with the actual flow?				Compare BOBCAT Ghosting data with actual traffic data
7.2	Were the length of the delays less?				Compare BOBCAT Ghosting data with actual traffic data
7.3	Were there workload issues? How are they addressed?				
<b>8</b>	<b>Benchmarking by airlines (Individual Airlines)</b>			<b>AIRLINES</b>	
8.1	Was there more on time departures?				Compare BOBCAT Ghosting data with actual traffic data
8.2	Were the length of delays reduced?				Compare BOBCAT Ghosting data with actual traffic data
8.3	Are the enroute re-routes reduced or eliminated?				
8.4	Are the delays more predictable? (Is there forewarning of delays, are delays better managed?)				

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<b>9</b>	<b>Overall Assessment Slot allocation</b>			<b>Task Force BOBCAT AIRLINES ANSP</b>	
9.1	Were slots distributed equitably?				
9.2	Were some airlines penalised more than others?				
9.3	Were some airports penalised more than others?				
<b>10</b>	<b>Flight planned levels (Overall Assessment )</b>			<b>Task Force BOBCAT AIRLINES ANSP</b>	
10.1	Were more flights getting flight planned levels based on BOBCAT solutions, in comparison with actual traffic flows?				Compare BOBCAT Ghosting data with actual traffic data
<b>11</b>	<b>Assessment by the Task Force</b>			<b>Task Force</b>	
11.1	Did at least 85% of flights thru Kabul Airspace participate in the ghosting period?				
11.2	Is the Task Force satisfied that the statistics indicate the likely improvement in delays, and flight level allocations, after scrutinising the one week data collected.				

11.3	Is the Task Force satisfied that any remedial action required can be executed in time for a successful operational trial				
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-----End -----

**Suggested ATFM/TF Targets for consideration**

1. ANSPs for departure aerodromes report encountering no major problems during the trial.
2. ANSPs for enroute segments report no major problems during the trial in providing tactical control and coordination with ATFMU and other ACCs
3. 95% of all flights thru Kabul from all departure aerodromes are subject to ATFM procedures
4. All relevant States have published the appropriate AIPs
5. The Task Force is satisfied that the statistics collected during the operational trial show improved delay situation, delays are more predictable, FL availability, and alleviation of reroutes.

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(AIRPORT ) DEPARTURES TO EUROPE ENTERING KABUL FIR BETWEEN 2000 AND 2359UTC (GHOSTING & OPERATIONAL TRIAL)

Date: 00 JUN 06

S/N	ETD	Aircraft		Bay	To	BoB Route	FPL LVL	Time FL Req (A)	Time FL Appvd	Time Push Back	Time Taxi	Route in Kabul	ATFM Level	FL in Kabul FIR	ATO Kabul Entry	Mach No	RWY	AWUT	ATD (B)	Raw Delay (B)-(A)	*Delay (mins)
		Callsign	Type																		
1	2300	SIA002	B744	E5	LFPG	L759	300	2300	2301	2301	2309	L750				M84	02R		2318	18	0
2	2240	BAW01	B744	C24	EGLL	L759	280	2309	2311	2312	2318	A466				M84	02L		2328	19	0
3	2325	AFR001	B772	E3	LFPG	L759	320	2317	2318	2321	2326	L750				M84	02R		2339	22	0
4	2320	SIA003	B744	F56	EGLL	P628	300	2320	2322	2327	2334	L750				M86	02R		2345	25	0
5	2330	KLM001	B744	D46	EHAM	L759	300	2320	2323	2327	2337	A466				M84	02R		2350	30	5
6	2320	QFA1	B744	C23	EGLL	L759	320	2319	2325	2342	2350	A466				M84	02L		0002	43	18
7	2325	QFA2	B744	C22	LFPG	L759	320	2324	2328	2352	2357	L750				M84	02L		0015	51	26
8	2359	DLH001	B744	E4	EDDF	N877	300	2353	2356	0001	0003	L750				M86	02R		0017	24	0
9	2350	SIA005	B744	E28	EDDF	P628	300	2354	2357	2359	0006	L750				M85	02R		0020	26	1
10	2300	QFA3	B744	C26	EDDF	L759	320	2335	2339	0001	0008	A466				M84	02R		0025	50	25
11	2335	BAW02	B744	C13	EGLL	L759	300	2355	2357	0012	0019	A466				M83	02R		0037	42	17
12	2355	SIA006	B744	E24	LSZH	L759	280	0004	0014	0036	0045	L750				M85	02R		0059	55	30
13	0100	SIA007	B772	F37	EKCH	L759	320	0057	0130	0135	0136	L750				M83	02R		0145	48	23
14																				0	NIL
15																				0	NIL
16																				0	NIL
17																				0	NIL
18																				0	NIL
19																				0	NIL
20																				0	NIL

\* Delay = "x" less 25 minutes (negative values displayed as 0)

Flight Distribution										
					N877	P628	L759	M770	Total	%
0	0	0	0	0	1	2	10	0	13	100

Nos of flights delayed > 15 minutes	6
Total delay (in minutes)	139
Average delay per flight (in minutes)	23.2
Percentage of Flights Delayed	46.15%

Number of flights without delay	5	38.46%
Number of flights delayed from 1 to 15 minutes	2	15.38%
<b>Significant Delays :</b>		
Number of flights delayed from 16 to 30 minutes	6	46.15%
Number of flights delayed from 31 to 45 minutes	0	0.00%
Number of flights delayed from 46 to 60 minutes	0	0.00%
Number of flights delayed from 61 to 75 minutes	0	0.00%
Number of flights delayed more than 76 minutes	0	0.00%

**Legend :** Insert all timings in the following format  
HH:MM eg. 23:55  
All timings after 2400 or 0125 should be typed as  
24:00 or 25:25 if it falls on the following day

W : B : YYS

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BREAK DOWN OF DELAYS

S/N	CSN	ETD (A)	RCL (B)	FL APPVD (C)	P/B (D)	TIME TAXI (E)	ATD (F)	ATC lapse (C - B)	Push delay (D - C)	STD Diff (D - A)	Taxi lapse (F - E)	REMARKS
1	SIA002	2300	2300	2301	2301	2309	2318	0:01	0:00	0:01	0:09	Aircraft was initially No 2 in sequence behind XXX. However, XXX's ATC was cancelled and YYY becomes No 1. Revised ATC given at 2301.
2	BAW01	2240	2309	2311	2312	2318	2328	0:02	0:01	0:32	0:10	ATC cancel at 2251 and 2259. New ATC issued at 2311.
3	AFR001	2325	2317	2318	2321	2326	2339	0:01	0:03	0:00	0:13	
4	SIA003	2320	2320	2322	2327	2334	2345	0:02	0:05	0:07	0:11	
5	KLM001	2330	2320	2323	2327	2337	2350	0:03	0:04	0:00	0:13	
6	QFA1	2320	2319	2325	2342	2350	0002	0:06	0:17	0:22	0:12	
7	QFA2	2325	2324	2328	2352	2357	0015	0:04	0:24	0:27	0:18	Aircraft not able to pushback earlier due XXX pushback from C23. Aircraft was sent to 02L to expedite departure to be 10 minutes behind XXX However, was not able to let aircraft depart as an arrival YYYY4 was 6nm final.
8	DLH001	2359	2353	2356	0001	0003	0017	0:03	0:00	0:00	0:14	ATC cancel at 2310. New ATC issued at 2339.
9	SIA005	2350	2354	2357	2359	0006	0020	0:03	0:02	0:09	0:14	
10	QFA3	2300	2335	2339	0001	0008	0025	0:04	0:00	0:00	0:17	
11	BAW02	2335	2355	2357	0012	0019	0037	0:02	0:00	0:00	0:18	Aircraft's taxiing speed was slow.
12	SIA006	2355	0004	0014	0036	0045	0059	0:10	0:22	0:00	0:14	Aircraft reached holding point 02R at 0053. However, an arrival (xxxx) was on 6nm final, so was not able to let yyy depart until after the arrival. XXXX was last on the sequence.
13	SIA007	0100	0057	0130	0135	0136	0145	0:33	0:05	0:00	0:09	

### Explanatory notes for filling in the ATFM data collection templates for ghosting period and operational trial

Column	Subject	Meaning	Remarks
A	S/N	Serial number	
B	ETD	Estimated time of departure	
C	CALLSIGN	Callsign	
D	TYPE	Aircraft type	
E	BAY	Parking stand	
F	TO	Destination aerodrome	
G	BOB ROUTE	Bay of Bengal Route	
H	FPL LVL	Flight Plan Level	
I	TIME FL REQ	Time Flight Level requested	
J	TIME FL APPVD	Time Flight Level approved	
K	TIME PUSH BACK	Time aircraft commenced push back	
L	TIME TAXI	Time the aircraft commenced taxi-out	
M	ROUTE IN KABUL	Route in Kabul FIR	
N	ATFM LEVEL	ATFM allocated Flight level	
O	FL IN KABUL FIR	Actual Flight level flown in Kabul FIR	
P	ATO Kabul Entry	Actual Time over Kabul entry point	
Q	MACH NO	Mach Number	
R	RWY	Runway	
S	AWUT	ATFM Allocated wheels up time	
T	ATD (B)	Actual Time of Departure	Do not fill this column
U	RAW DELAY (B)-(A)	Actual time of departure minus Time Flight level requested	Do not fill this column
V	DELAY (MINS)	Actual time of departure minus Time Flight level requested minus push back and taxi time (total of 15 minutes)	Do not fill this column

23 JUN 06

ICAO Bay of Bengal ATS Coordination Group – ATFM Task Force

**MODEL TRIGGER NOTAMS – BAY OF BENGAL ATFM OPERATIONAL TRIAL**

**NOTAM #1 – Activate Ghosting**

**E) TRIGGER NOTAM (name of State/authority) ATFM GHOSTING EFFECTIVE 0606291200, GHOSTING OPERATIONS WILL COMMENCE FOR THE ATFM OPERATIONAL TRIAL OVER BAY OF BENGAL, SOUTH ASIA AND PAKISTAN THROUGH KABUL FIR IN ACCORDANCE WITH AIP SUPPLEMENT (reference number).**

**SUBSEQUENT TO SUCCESSFUL GHOSTING PERIOD COMMENCEMENT OF FULL OPERATIONAL TRIAL IS ANTICIPATED ON OR AFTER 6 JULY 2006 AND WILL BE IMPLEMENTED BY SEPARATE NOTAM**

**FOLLOWING COMMENCEMENT OF OPERATIONAL TRIAL, FLIGHTS DEPARTING WITHOUT AN ALLOCATED SLOT WILL BE ACCOMMODATED ONLY AFTER FLIGHTS WITH SLOTS HAVE BEEN PROCESSED AND SHOULD EXPECT DELAYS FOR REQUESTED ROUTES AND LEVELS.**

**NOTAM #2 – Activate Operational Trial**

**E) TRIGGER NOTAM (name of State/authority) ATFM TRIAL EFFECTIVE yy/mm/dd1200, ATFM OPERATIONAL TRIAL OVER BAY OF BENGAL, SOUTH ASIA AND PAKISTAN THROUGH KABUL FIR WILL COMMENCE IN ACCORDANCE WITH AIP SUPPLEMENT (reference number).**

**AFFECTED FLIGHTS DEPARTING WITHOUT AN ALLOCATED SLOT WILL BE ACCOMMODATED ONLY AFTER FLIGHTS WITH SLOTS HAVE BEEN PROCESSED AND SHOULD EXPECT DELAYS FOR REQUESTED ROUTES AND LEVELS.**

.....





**Bangkok Air Traffic Flow Management Unit (Bangkok ATFMU)**

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E-Mail: [atfmu@bobcat.aero](mailto:atfmu@bobcat.aero)

AFTN: VTBDZDZX

## ORGANIZATIONAL CONTACT INFORMATION FORM

To be submitted to Bangkok ATFMU

### ORGANIZATION CONTACT INFORMATION

Organization Name: \_\_\_\_\_

Organizational Unit Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Tel: \_\_\_\_\_

AFTN: \_\_\_\_\_

Fax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date of Submission: \_\_\_\_\_

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Appendix K

**ATS ROUTE NAME:**  
REQUESTED BY: IATA

<p><b>ENTRY/EXIT POINT</b></p> <p><b>ROUTE DESCRIPTION</b> GIVAL ... Penang(VPG)</p> <p><b>FLIGHT LEVEL BAND</b></p> <p><b>28000 - 46000</b></p> <p><b>PRIORITY: HIGH/MED/LOW</b></p> <p><b>HIGH</b></p>	<p style="text-align: center;"><b>CHART</b></p>
--	---

<b>Action Required</b>	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO <sub>2</sub>		
No <sub>x</sub>		

**Remarks**

Potential City Pairs:

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**ATS ROUTE NAME:**  
REQUESTED BY: IATA

<p><b>ENTRY/EXIT POINT</b></p> <p><b>ROUTE DESCRIPTION</b> Ranong(RAN) ... Hat Yai(HTY)</p> <p><b>FLIGHT LEVEL BAND</b></p> <p><b>28000 - 46000</b></p> <p><b>PRIORITY: HIGH/MED/LOW</b></p> <p><b>HIGH</b></p>	<p style="text-align: center;"><b>CHART</b></p>
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<b>Action Required</b>	IATA
	ICAO

Saving	Per flight	Annual
Mileage / Time		
Fuel		
CO <sub>2</sub>		
No <sub>x</sub>		

**Remarks**

Potential City Pairs: