



International Civil Aviation Organization

The First Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/1)

Bangkok, Thailand, 19 – 23 September 2011

Agenda Item 3: Review Current Operations and Identify Problem Areas

BOBCAT OPERATIONAL UPDATES AND FUTURE ARRANGEMENT

(Presented by Thailand)

SUMMARY

The purpose of this working paper is to present an analysis and overview of operational data on Westbound flights operating through the Kabul FIR associated with the ATFM BOBCAT process from the commencement of the ATFM Operational Trials in July 2007 to May 2011. This working paper also presents BOBCAT software update plan, related Collaborative Decision Making development for BOBCAT departures from Bangkok Suvarnabhumi Airport, hardware migration progress and items related to Kabul FIR RVSM implementation.

1. **INTRODUCTION**

1.1 The meeting would recall that on AIRAC 5 July 2007, international long range ATFM procedure using the BOBCAT system became fully operational.

1.2 It was agreed at the 13th meeting of the ATFM Task Force held in September 2009 that monthly traffic data would be collected by all States for one agreed week each month, sent to the ATFMU and analyzed by the BOBCAT Development Team for presentation to the periodic meetings of the ATFM Task Force.

1.3 The meeting should also note the APANPIRG/20 decision to dissolve the ATFM Task Force and that further BOBCAT matters should be followed up at the Regional ATFM Steering Group meeting, BBACG meetings (now SAIOACG) or BOB-RHS Task Force meetings.

2. **DISCUSSIONS**

2.1 Over the four (4) years since operational implementation of the ATFM procedures commenced on AIRAC 5 July 2007 to 31 July 2011, 81,621 aircraft submitted slot request, with over 90 percent accepting their slot allocation. The small percentage of other aircraft may have various reasons for not accepting their slot allocations such as delay factor, route availability and sometimes weather which allowed a more efficient and cost-effective route outside the Kabul FIR.

2.2 The meeting should also note that, the average traffic per night have increased from 38 since operational trial's commencement in July 2006, to 59 in January 2011 – July 2011, with peak traffic of between 67-72 aircraft/night. Further information on Slot Request statistics, potentially reflecting westbound traffic demand through the Kabul FIR is shown in Figure 1.

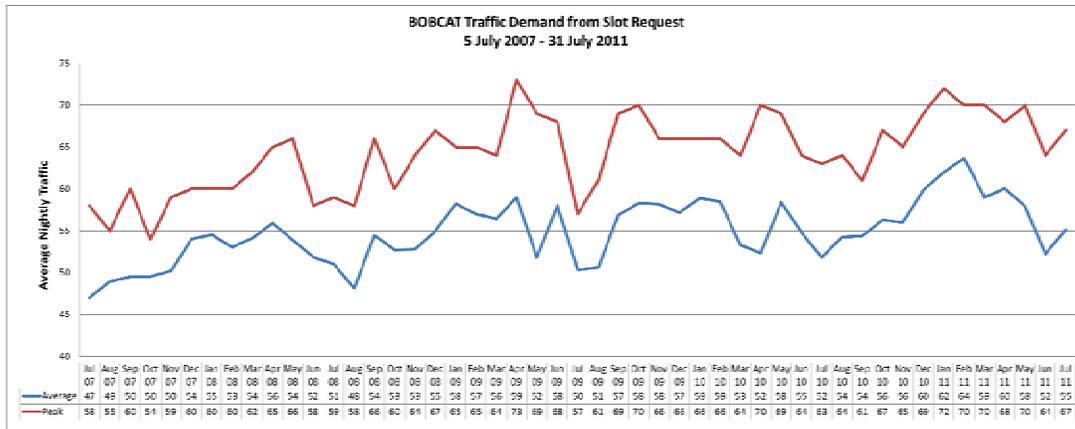


Figure 1: BOBCAT Slot Request Statistics (5 July 2007 – 31 July 2011)

2.3 While slot requests continue to increase, the number of airline involved has also increased to 53 airline operators in July 2011. The updated airline participation since operational trials is shown in Figure 2.

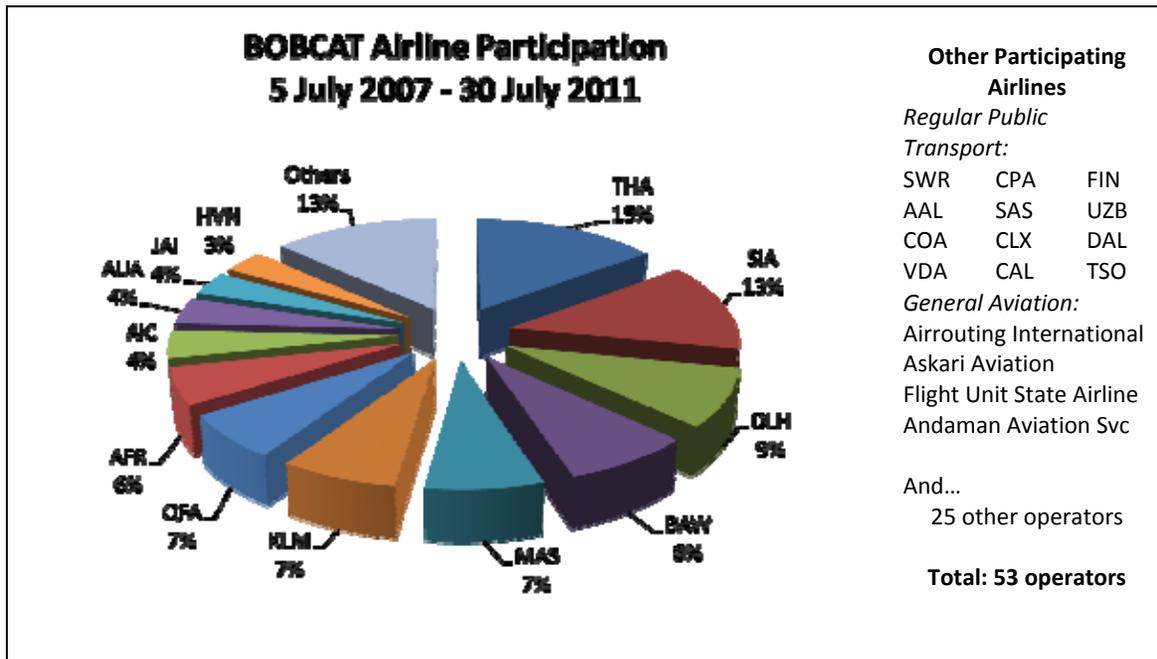


Figure 2: BOBCAT Airline Participation since ATFM Implementation (5 July 2007 – 31 July 2011)

Overall Data Analysis – Traffic Distribution by Airport

2.4 The meeting is invited to note weekly traffic number from Top-8 airports entering the Kabul FIR between July 2007 and July 2011 in Figure 3.

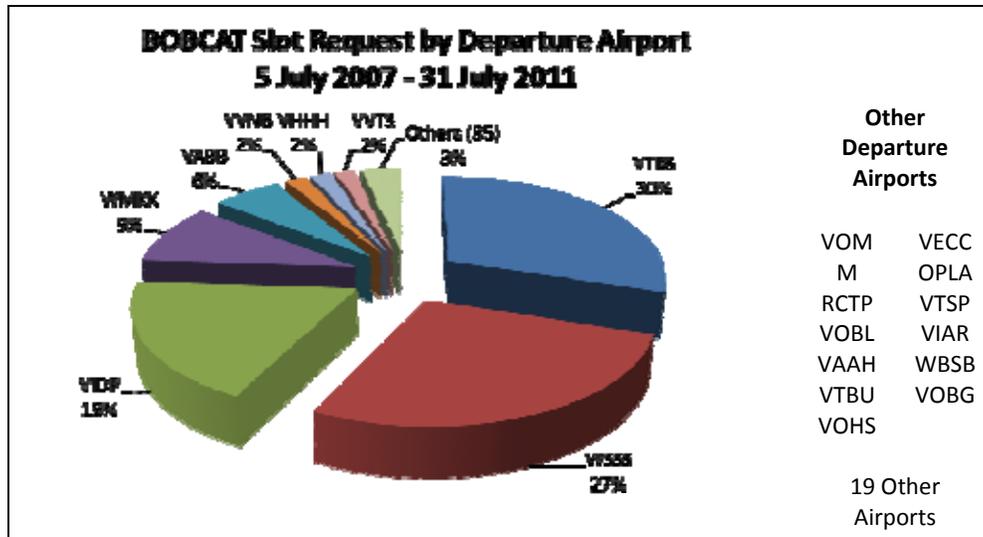


Figure 3: BOBCAT Traffic Demand from Slot Request Information organized by Departure Airport (5 July 2007 – 31 July 2011)

2.5 Further statistical analysis will be presented to the SAIOACG meeting in plenary.

BOBCAT Software Updates

2.6 The meeting would recall discussion at BBACG/21 meeting in March 2011, which BOBCAT software upgrades were prioritized into the following phasing based on priority:

- a) **Phase 1: High Priority**
 1. Flight and ATS Messages Processing
 2. Flexible Taxi Time
- b) **Phase 2: Medium Priority**
 1. Slot Swapping & Automatic Slot Compression
- c) **Phase 3: Low Priority**
 1. Slot Allocation page changes & Gate Delay Calculation
 2. Integration of Data Collection and Analysis

2.7 The meeting is informed that AEROTHAI software engineering team have started work on BOBCAT Software Update Phase 1, beginning with Flight Plan and ATS Messages Processing, followed by Flexible Taxi Time.

2.8 It is expected that the BOBCAT Software Update Phase 1 can be delivered by 2012, with features satisfying requirements of CDM development at the Bangkok Suvarnabhumi Airport as well as other CDM initiatives AEROTHAI is currently involved.

CDM Development at Bangkok Suvarnabhumi Airport

2.9 The meeting would recall discussion at the BBACG/21 in March 2011 on CDM development at the Bangkok Suvarnabhumi Airport.

2.10 An operational trial of an initial CDM procedure at the Bangkok Suvarnabhumi Airport has been in place since 8 April 2011. In this initial CDM procedure, handover FL will be pre-planned for aircraft exiting the Bangkok FIR during the BOBCAT hours (exiting the Bangkok FIR westbound between 1400-1859UTC) using routes normally taken by aircraft with BOBCAT slot allocation (L507 and P646) based on flight plan submitted.

2.11 The initial CDM process involves the Bangkok ATFMU, Bangkok ACC and Bangkok Suvarnabhumi Tower. It is expected that as the procedure will continue to mature and encompass all stakeholders involved including airlines, airport operator and ground handling agents under the airport CDM principle.

2.12 Feedbacks of the procedure have so far been positive, enhancing flexibility of aircraft departures from the Bangkok Suvarnabhumi Airport.

2.13 Meanwhile, agreement among aviation partners in Malaysia, Singapore and Thailand as outlined in IP02 also submitted to the SAIOACG/1 meeting is expected to contribute positively to the ongoing CDM development at the Bangkok Suvarnabhumi Airport.

2.14 It is anticipated that if the CDM process is implemented throughout all ANSPs involved, issues related to departures punctuality, EET inaccuracy and tactical ATC issues causing aircraft to transit the Kabul FIR at a flight level lower than slot allocation would be substantially addressed.

2.15 These three issues combined can be attributable to majority of cases where aircraft transit the Kabul FIR at a flight level lower than slot allocation.

RVSM Implementation in the Kabul FIR

2.16 The meeting is invited to note discussion at APANPIRG/22 in September 2011 on progress of the EURASIA RVSM Task Force under auspices of ICAO European / North Atlantic Office (Paris), which RVSM implementation were proposed on AIRAC 17 November 2011 in the Kabul FIR.

2.17 While the BOBCAT system can be independently configured to take advantage of additional flight levels becoming available with RVSM implementation as outlined in WP09 submitted to the BOB-RHS/TF/6 meeting, several actions may need to be discussed and agreed to:

- a) Handling of BOBCAT aircraft in the Bay of Bengal;
- b) Post-RVSM Flight Level Availability in the Kabul FIR;
- c) Initial Slot Allocation Priority In Place; and,
- d) Amendment of AIP and Relevant Aeronautical Publications.

Handling of BOBCAT Aircraft in the Bay of Bengal

2.18 The meeting is advised on the nature of flights from Southeast Asian airports such as Bangkok, Kuala Lumpur and Singapore to Europe. Due to the long-haul nature of these flights with total flight time of approximately 10 hours, these aircraft would most likely remain heavy in the first hours from departure, with best feasible flight level of FL320, while very few may be able to reach FL340 by the time they are about to enter the Bay of Bengal. This implies that most aircraft would remain on FL280, FL300 and FL320 at best.

2.19 Meanwhile, when these aircraft are in position to enter the Kabul FIR, these aircraft would be in position to suitably cruise at FL350, with very few being able to reach FL390. In the days of CVSM in the Kabul FIR, this implies the use of FL280, FL310 and FL350.

2.20 With the implementation of RVSM, number of flight levels available for majority of aircraft is expected to increase to FL280, FL300, FL320, FL340 and FL360.

2.21 The meeting is reminded that current BOBCAT slot allocation optimizes entry into the Kabul FIR. As a result, during the busy hour within the BOBCAT operations hour where all FLs are occupied 15 minutes apart, 20 Kabul FIR entry slots will be allocated, producing operationally feasible capacity of 20 aircraft/hour.

2.22 However, if these slots are allocated to aircraft departing from the same airport, planning to enter the Bay of Bengal using the same route, operationally feasible capacity in the Bay of Bengal would be 18 aircraft/hour since 10-minute procedural separation is in use with FL280, FL300 and FL320 operationally feasible. If one takes the five-minute buffer into account, this could reduce operationally applicable capacity to 12 aircraft/hour, significantly less than that prior to entry into the Afghanistan airspace. Operationally feasible capacity can be illustrated in Figure 4.

Afghanistan		Bay of Bengal
RVSM FL	CVSM FL	RVSM FL
FL360		
	FL350	
FL340		
FL320		FL320
	FL310	
FL300		FL300
FL280	FL280	FL280
Operationally Feasible Capacity: 20 aircraft/hr (15-minute spacing)	Operationally Feasible Capacity: 12 aircraft/hr (15-minute spacing)	Operationally Feasible Capacity: 12 aircraft/hr (15-minute spacing)

Figure 4: Illustration of Operationally Feasible Capacity Comparison for Bay of Bengal airspace with Afghanistan airspace with RVSM and CVSM flight levels

Note: CVSM FL390 and RVSM FL380 / FL400 not included in the analysis due to smaller population of aircraft being able to transit the Kabul FIR using these levels.

2.23 Therefore, it could be the case that air traffic “bottleneck” may shift east to the Bay of Bengal after implementation of RVSM in the Afghanistan airspace.

2.24 The BOBCAT Development Team will conduct a simulation to examine situation with the goal of reporting results to the SAIOACG/1 meeting in plenary.

2.25 Notwithstanding potential “bottleneck shift,” there are several possible solutions order from more pre-tactical to strategic:

- a) Enhanced pre-tactical CDM traffic pre-planning prior to departure to de-conflict flight level usage in the Bay of Bengal;
- b) Route structure re-alignment in the Bay of Bengal (by-pass routes);
- c) Additional BOBCAT sequencing waypoints prior to entering or exiting the Bay of Bengal.

2.26 The meeting is advised that the option of enhanced pre-tactical CDM traffic pre-planning requires expedited update of the BOBCAT software to enable FIR boundary crossing information to be shared, at least within the Bay of Bengal.

2.27 Moreover, suggested solutions in para 2.25 may not be mutually exclusive. It may be necessary to combine these solutions to some degree to ensure smooth and seamless handling of the AR-4 major traffic flow involved.

Post-RVSM Flight Level Availability

2.28 The meeting is advised of proposed post-RVSM flight level availability for the purpose of slot allocation:

Waypoint	CVSM Flight Levels	RVSM Flight Levels
LAJAK PAROD SERKA	FL390	FL400
	FL350	FL380
	FL310	FL360
		FL340
		FL320
PAVLO ROSIE	FL390	FL400
	FL350	FL380
	FL310	FL360
	FL280	FL340
		FL320
		FL300
	FL280	

Figure 5: Proposed Flight Level Availability after RVSM implementation in the Kabul FIR

Note: Inclusion of RVSM FL400 in availability may necessitate change in AIP Supplement associated with ATFM implementation

Initial Slot Allocation Priority In Place

2.29 The BOBCAT system is currently configured to accord higher priority for slot requests of aircraft departing from the Indian subcontinent requesting slot allocation at FL280 where available. On the other hand, higher priority is accorded to flights departing from airports east of the Bay of Bengal on flight levels higher than FL280.

2.30 The slot allocation priority has been in place since Operational Trial of the ATFM procedure with the initial aim to ensure that departures from the Indian subcontinent would be able to obtain slot allocation.

2.31 Nevertheless, subsequent study shows that, with the initial BOBCAT slot allocation process being performed at 1200UTC for all slot requests, aircraft departing from all departure airports are already competing for slot allocation on an equitable basis notwithstanding any sort of initial slot allocation priority. Unfortunately, no final decision has been made in respect to whether the priority is necessary.

2.32 As RVSM implementation in the Kabul FIR introduces more flight levels available for the initial slot allocation process, initial slot allocation priority may not be necessary. In fact, it has been argued earlier that initial slot allocation priority may have an adverse effect of keeping departures from the Indian subcontinent at FL280 instead of suitably higher flight level.

Amendment of AIP and Relevant Aeronautical Publications

2.33 The meeting is invite to note that initial model AIP Supplement used for operational implementation of ATFM procedure using the BOBCAT system in **Attachment A**.

2.34 The meeting is advised that changes to routes involved in the ATFM procedure up to 30 June 2011 may have already necessitate changes in respective pages of the AIP Supplement, which have most likely been integrated into State AIPs.

2.35 In addition, implementation of RVSM in the Kabul FIR would necessitate substantial changes to content of the AIP Supplement as such that a new AIP Supplement may be necessary.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Note the data collated by the Bangkok ATFMU;
- b) Discuss data collection results;
- c) Consider appropriate remedial actions;
- d) Discuss handling of BOBCAT aircraft in the Bay of Bengal after RVSM implementation in the Kabul FIR;
- e) Discuss flight level availability within the BOBCAT system after RVSM implementation in the Kabul FIR;
- f) Discuss future of initial slot allocation priority in place in the BOBCAT system; and,
- g) Discuss amendments of relevant aeronautical publication to enable smooth transition to RVSM implementation in the Kabul FIR.

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For effective date July 2007 AIRAC – 5 July 2007(0707051200UTC)

ICAO Bay of Bengal ATS Coordination Group – ATFM Task Force

MODEL AIP SUPPLEMENT – BAY OF BENGAL ATFM PROCEDURES

Note: Text identified as **(ANSPs)** and/or **(ATC units)** should be replaced with the name of State organizations and units as appropriate.

**IMPLEMENTATION OF AIR TRAFFIC FLOW MANAGEMENT PROCEDURES
OVER BAY OF BENGAL, SOUTH ASIA AND PAKISTAN THROUGH KABUL FIR**

1 Introduction

- 1.1 On 24 July 2006, the States of the ICAO Asia/Pacific Region within the Bay of Bengal, South Asia and Pakistan airspace implemented an operational trial of an automated Air Traffic Flow Management (ATFM) service under the auspices of the ICAO Bay of Bengal ATS Coordination Group – ATFM Task Force, as detailed in previous AIP Supplement (nnnn) dated (yymmdd).
- 1.2 Pursuant to comprehensive reviews of the performance of the operational trial by the ATFM Task Force, ATFM procedures are permanently implemented in accordance with the provisions of this AIP Supplement.

2 Provision of ATFM Services

- 2.1 ATFM services are provided by Aeronautical Radio of Thailand LTD (AEROTHAI) from the Bangkok Air Traffic Flow Management Unit (ATFMU) at Bangkok ACC. ATFM services will be limited to calculation, promulgation and management of mandatory Allocated Wheels Up Time (AWUT) and Kabul FIR flight level, ATS route and entry fix time for each affected flight.
- 2.2 Air Navigation Services Providers (ANSPs) retain responsibility for the tactical management of flights that are subject to ATFM. In discharging tactical responsibilities, ANSPs will manage non-ATFM compliant flights using delayed pushback and start clearances, non-preferred routes and/or flight levels, enroute holding and/or diversion around Kabul FIR.
- 2.3 The ATFMU utilises the automated, web based Bay of Bengal Cooperative ATFM System (BOBCAT) in meeting its ATFM responsibilities. These responsibilities will be managed in coordination with aircraft operators and ANSPs in the FIRs concerned.
- 2.4 The ATFMU operates on a 24 hour basis and is responsible for westbound flights entering the Kabul FIR at specified times, flight levels and ATS routes in accordance with paragraph 3 of this AIP Supplement. The objectives of these ATFM services are to:

- a) Reduce ground and en-route delays;
- b) Maximise capacity and optimize the flow of air traffic within the area;
- c) Provide an informed choice of routing and flight level selection;
- d) Alleviate unplanned in flight re-routing and technical stops; and
- e) Assist regional ANSPs in planning for and managing future workload in the light of forecast increased traffic flows within the area.

3 ATFM affected ATS routes, flight levels and applicable hours

All westbound flights intending to enter the Kabul FIR between 2000UTC and 2359UTC daily on ATS routes A466, L750, N644 from FL280 to FL390 inclusive and G792/V390 from FL310 to FL390 inclusive shall comply with the ATFM procedures contained in this AIP Supplement. This includes a mandatory requirement for all flights to obtain a specific ATFM slot allocation from the ATFMU (including AWUT) for entry into the Kabul FIR during the period mentioned above.

- 3.2 Flights who plan to enter Kabul FIR without an AWUT and entry slot (comprising flight level, ATS route and entry fix time) will be accommodated only after flights with slots have been processed. Such flights should expect delayed pushback and start clearances, non-preferred routes and/or flight levels, enroute holding and/or diversion around Kabul FIR.
- 3.3 In order to ensure availability of slots for westbound departures from designated airports in northern India and Pakistan, departures from these airports are given priority for FL280 in the slot allocation. This does not preclude these flights from requesting higher flight levels with initial slot request.

4 Flights Exempted from BOBCAT ATFM

- 4.1 The following flights are exempted from the ATFM procedures in this AIP Supplement:
 - a) Humanitarian or medical flights
 - b) State aircraft with Head of State onboard
- 4.2 Flights exempted from ATFM procedures shall indicate the exemption in their flight plan (Field 18 – STS-BOB ATFM EXMP).
- 4.3 **(ATC Units)** shall forward the flight plan information to the ATFMU at AFTN address VTBBZDZX.

5 Mandatory AWUT and Kabul FIR Slot allocation

- 5.1 Affected flights shall obtain the mandatory AWUT, Kabul FIR entry time, flight level and ATS route from the BOBCAT system. The AWUT and Kabul slot allocation will enable ANSPs to tactically control westbound flights transiting the Kabul FIR at specified times by assigning minimum spacing requirements at established gateway fix points in the vicinity of the eastern boundary of the Kabul FIR.
- 5.2 The application, calculation and distribution of AWUT and Kabul FIR entry fix slot allocations will be managed via internet access to the BOBCAT system in accordance with the ATFM operating procedures in paragraph 6.

6 BOBCAT-Operating Procedures

- 6.1 All affected flights are required to submit slot requests to the BOBCAT system by logging onto <https://www.bobcat.aero> between 0001 and 1200UTC on day of flight and completing the electronic templates provided.
- 6.2 Affected operators who do not have dedicated BOBCAT username/password access should complete the attached application form in **Appendix A** and fax the form to the ATFMU as soon as possible.

6.3 Slot Allocation Process

- 6.3.1 The slot allocation process is divided into 3 phases, namely the slot request submission, initial slot allocation and finally slot distribution to aircraft operators and ANSPs.

Slot Request Submission

- 6.3.2 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 flight. Slot requests may subsequently be amended prior to 1200 UTC, which is the cut-off time. Aircraft operators are encouraged to submit additional slot request options in case their first choice is not available. This may include variations to ATS route, flight level and MAD.
- 6.3.3 Slot requests shall be for flight parameters that are able to be met by the flight. For example, flights requesting a slot at FL390 must be able to transit Kabul FIR at FL390. Flights subsequently unable to meet slot parameters (flight level, ATS route or entry fix time) should expect non-preferred routes and/or flight levels, enroute holding and/or diversion around Kabul FIR.
- 6.3.4 As BOBCAT will allocate FL280 on a priority basis to facilitate departures from northern India and Pakistan underneath over-flying traffic, flights departing these airports are encouraged to include FL280 as at least one slot request preference.
- 6.3.5 Flights that were not allocated a slot in the initial slot allocation, are not satisfied with the allocated slot or did not submit a slot request should select

slots from the listing of remaining unallocated slots available immediately after slot distribution has been completed.

Slot Allocation and Distribution

- 6.3.6 Slot allocation will commence at the cut-off time at 1200UTC. BOBCAT will process and generate the slot allocation based on the information submitted in the slot requests. Notification of slot allocation will be made not later than 1230UTC via the ATFMU website. Alternative arrangements for notification of slot distribution (e.g. E-mail, Fax, Telephone) should be coordinated with the ATFMU.
- 6.3.7 After the slot allocation has been published at <https://www.bobcat.aero>, aircraft operators can:
- a) Use the slot allocation result for ATS flight planning purposes,
 - b) Cancel the allocated slot and/or,
 - c) Change slot allocation to another available slot in the published list of unallocated slots.
- 6.3.8 **(ATC Units)** can also view the slot allocation results at <https://www.bobcat.aero>.

6.4 Submission of ATS Flight Plan

- 6.4.1 Once aircraft operators are in receipt of the slot allocation, they shall submit the ATS flight plan using the time, ATS route and flight level parameters of the BOBCAT allocated slot.
- 6.4.2 In addition to normal AFTN addressees, operators should also address flight plan (FPL) and related ATS messages (e.g. DLA, CNL, CHG) to the ATFMU via AFTN address VTBBZDZX for all flights that have submitted a slot request.

7 Aircraft Operator/Pilot in Command and ANSP Responsibilities

Aircraft Operator/Pilot in Command

- 7.1 In accordance with ICAO PANS ATM provisions, it is the responsibility of the Pilot in Command (PIC) and the aircraft operator to ensure that the aircraft is ready to taxi in time to meet any required departure time. PIC shall be kept informed by their operators of the AWUT, Kabul FIR entry fix times and flight parameters (route/level) nominated by BOBCAT.
- 7.2 The PIC, in collaboration with ATC, shall arrange take-off as close as possible to the AWUT in order to meet the Kabul FIR slot time.

ANSPs

- 7.3 In accordance with ICAO PANS ATM provisions, flights with an ATFM slot allocation should be given priority for take off to facilitate compliance with AWUT.
- 7.4 AWUT shall be included as part of the initial ATC clearance. In collaboration with PIC, **(ATC Units)** shall ensure that every opportunity and assistance is granted to a flight to meet AWUT and allocated entry fix times at Kabul FIR.

8 Coordination between Aircraft Operator/Pilot in Command, ANSPs and Bangkok ATFMU

- 8.1 The PIC shall include the AWUT in the initial ATC clearance request.
- 8.2 PIC shall adjust cruise flight to comply with slot parameters at the Kabul FIR entry fix, requesting appropriate ATC clearances including speed variations in accordance with published AIP requirements.
- 8.4 Prior to departure, in circumstances where it becomes obvious that the Kabul slot time will not be met, a new slot allocation should be obtained as soon as possible and via the most expeditious means (e.g. via coordination between flight dispatcher, PIC, **(ATC Units)** and Bangkok ATFMU). Early advice that the Kabul slot time will be missed also enables the slots so vacated to be efficiently reassigned to other flights.
- 8.5 Prior to departure, in the event that the aircraft is unable to meet the Kabul slot time, when requested by the PIC after the aircraft has left the gate **(ATC Units)** shall assist the PIC to coordinate with the ATFMU for a revised slot allocation.
- 8.6 The ATFMU (VTBBZDZX) shall be included in the list of AFTN addressees for NOTAMs regarding any planned activities that may affect slot availability (e.g. reservation of airspace/ closure of airspace, non-availability of routes, etc).
- 8.7 The ATFMU (VTBBZDZX) shall be included in the list of AFTN addressees for ATS messages (e.g. FPL, DEP, DLA, CHG, CNL) relating to flights subject to ATFM procedures.
- 8.8 A missed slot results in dramatically increased coordination workload for ATC and PIC and should be avoided. To minimize coordination workload in obtaining a revised slot allocation, the following procedures are recommended:
- a) If the flight is still at the gate, coordination should take place via operators/flight dispatchers to ATFMU;
 - b) If the flight has left the gate, coordination to ATFMU may also take place via the ATS unit presently communicating with the flight.

9 Basic computer requirement

- 9.1 Aircraft operators and (**ANSPs**) are required to have computer equipment capable of connecting to the BOBCAT website <https://www.bobcat.aero> via the internet and satisfying the following minimum technical requirements:
- a) A personal computer of any operating system with the following characteristics:
 - i) Processor: minimum CPU clock speed of 150 MHz;
 - ii) Operating System: Any that operates one of the following web browsers (i.e. Windows 2000/XP, Linux, Unix, or Mac OS);
 - iii) Web Browser: Internet Explorer 5.5 or newer, Mozilla 1.0 or newer, Mozilla Firefox 1.0 or newer, Netscape 7 or newer;
 - 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; and
 - vii) Internet Connection: 56 Kbps Modem or faster.

10 ATFM Users Handbook

- 10.1 Supporting documentation, including detailed information in respect of the ATFM operations described above and other pertinent information has been included in the *Bay of Bengal and South Asia ATFM Handbook* (the “ATFM Users Handbook”), available at <https://www.bobcat.aero>
- 10.2 ANSPs and aircraft operators shall ensure that they are conversant with and able to apply the relevant procedures described in the ATFM Users Handbook.

11 Contingency Procedures

- 11.1 In the event that an aircraft operator or (**ANSP**) is unable to access the ATFMU website, the ATFMU shall be contacted via the alternative means (telephone, fax, AFTN) described in paragraph 13.
- 11.2 Contingency procedures for submission of slot request, including activation of Contingency Slot Request Templates (CSRT), are included in the ATFM Users Handbook.
- 11.3 In the event of system failure of BOBCAT, ATFMU shall notify all parties concerned and advise that ATFM slot allocation procedures are suspended. In this event, all parties concerned will revert to the existing ATM procedures as applicable outside the daily period of ATFM metering.

12 ATFM System Fault Reporting

- 12.1 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.
- 12.2 Aircraft operators and **(ATC units)** experiencing an ATFM system fault should complete an ATFM System Fault Report Form from the ATFM Users Handbook (see **Appendix B**) 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 feed back to the parties concerned to enable remedial action.

13 Address of Air Traffic Flow Management Unit (ATFMU)

- 13.1 The ATFMU may be contacted as follows;

- Unit Name: Bangkok ATFMU
- 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
- ATFN: VTBBZDZX
- Website: <https://www.bobcat.aero>

14 Implementation

This AIP supplement becomes effective from 0707051200UTC, and supersedes and cancels AIP Supplement (nnnn) dated (yymmdd)

15 Cancellation

This AIP Supplement will be cancelled when the contents have been incorporated into AIP.



Bangkok Air Traffic Flow Management Unit (Bangkok ATFMU)

Tel: +66-2-287-8024

+66-2-287-8025

Tel/Fax: +66-2-287-8026

Fax: +66-2-287-8027

E-Mail: atfm@bobcat.aero

AFTN: VTBBZDZX

BOBCAT 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: _____

E-Mail: _____

Signature: _____

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: _____