

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



**SUMMARY OF DISCUSSION
ATS SPECIAL COORDINATION MEETING
FOR BOBCAT ATFM ROUTES IN SOUTH-EAST ASIA
(SCM ATFM SEA ROUTES)**

BANGKOK, THAILAND

17 OCTOBER 2008

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

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SCM ATFM SEA ROUTES
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1.1 **Introduction**

1.1.1 The ATS Special Coordination Meeting for BOBCAT ATFM Routes in South-East Asia (SCM ATFM SEA ROUTES) was held at the ICAO Asia and Pacific Regional Office, Bangkok, Thailand on 17 October 2008, immediately following the WPAC/SCS RSG/5 Meeting.

1.2 **Officers, Secretariat and Participants**

1.2.1 The meeting was opened by Mr. Andrew Tiede, Regional Officer ATM, on behalf of Mr. Mokhtar A. Awan, ICAO Asia Pacific Regional Director. Mr. Tiede highlighted that the purpose of the meeting was to make progress in respect to two main issues affecting the traffic subject to BOBCAT metering as part of the Bay of Bengal ATFM procedures. The two issues were the traffic feed from South-East Asia to ATS route UL333 in Kabul FIR via N571/N877 and bypass arrangements to mitigate traffic bunching in the Bangkok FIR for traffic using L759.

1.2.2 Mr. Tiede acted as the Moderator and Secretary for the meeting.

1.2.3 Twenty-five (25) participants from Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand, Viet Nam and IATA attended the meeting. A list of participants is in **Appendix A** to the Summary of Discussion.

1.3 **Documentation and Working Language**

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

1.3.2 Four (4) working papers and two (2) information papers 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: | UL333 SERKA - SOKAM and B466 SERKA - PAROD Implementation Management |
| Agenda item 3: | Other ATFM Route Issues |
| Agenda item 4: | Any other business |

Agenda Item 2: UL333 SERKA - SOKAM and B466 SERKA - PAROD Implementation Management

2.1 The meeting recalled that arising from the previous work of the ATFM/TF, Afghanistan had agreed to implement an ATS route segment between SERKA and SOKAM connecting Pakistan and Iran across the southern portion of the Kabul FIR. Afghanistan had published AIP Supplement 01/08 which implemented route SERKA - SOKAM as an extension to ATS route UL333 with effect from AIRAC 28 August 2008.

2.2 Simultaneously, restrictions on usage of B466 in Kabul FIR had been lifted on the basis that as BOBCAT was reliable metering this traffic, Pakistan would ensure that westbound flights on the intersecting G792 would not conflict with B466 traffic at PAROD in Kabul FIR.

2.3 However, the ATFM/TF/12 meeting (Cairo, 13-17 July 2008, with IRAI meeting) had recognized that bunching problems were likely to occur in the Kuala Lumpur FIR as traffic from South-East Asia was fed into this increased route capacity in Kabul FIR. ATFM/TF/12 agreed that suitable traffic management measures should be in place to assist Kuala Lumpur ACC for traffic originating from Singapore and Kuala Lumpur and considered that to manage traffic bunching on N571/N877, flights need to be able to be diverted to L510. This would require the establishment of connector routes at the Malaysia and India ends of L510, respectively and until such connector routes were available the ATFM/TF agreed that Malaysia should issue NOTAM A2364 advising of flight planning restrictions for traffic via N571/N877 – as shown in **Appendix C**.

Malaysia Update

2.4 Subsequent to the ATFM/TF/12 meeting, Malaysia had taken a number of actions to support ATFM traffic flows generally and UL333 traffic flows specifically.

2.5 Malaysia has published AIP SUP 36/2008 (**Appendix D** refers) concerning the realignment of RNP10 RNAV routes P628, L510 and N571 in Kuala Lumpur FIR which will be implemented on 20 November 2008. One of the primary objectives of the realigned routes is to provide early access to optimum levels for affected flights from P628 being diverted to L510.

2.6 Malaysia has also issued AIP SUP 37/2008 (see **Appendix E**) to establish conditional ATS route Y338 from 20 November 2008 between VAMPI and LEKIR in Kuala Lumpur FIR. The purpose of establishing this conditional unidirectional westbound route is to allow ATFM flights entering Kabul FIR via SERKA which are flight planned along N571/N877 to be diverted to L510 by Kuala Lumpur ACC during bunching of traffic. This meant that bypass capability would be available at the Malaysian end from 20 November however, before traffic can be diverted to L510 using Y338,

capability must also exist at the western end of L510 in the Chennai FIR to enable flights to return from L510 to N877.

2.7 Malaysia also provided updated traffic movement data to the meeting, as shown in Table 1 below.

MONTHS (2008)	P628	L759	M770	L510	M751/L507	Total Flights
January	254	312	35	3	1	605
February	261	211	21	2	0	495
March	272	282	29	3	0	586
April	246	310	48	1	6	611
May	291	311	27	0	4	633
June	286	226	21	2	2	537
July	299	206	26	3	0	534
August	244	195	41	2	0	482
September	262	251	29	0	0	542
TOTAL	2415	2304	277	16	13	5025
Percentage	48.00	45.85	5.51	0.31	0.25	100

TABLE 1 – Total Number of ATFM Flights Departing from Kuala Lumpur and Singapore

2.8 In the context of using L510 as a bypass for traffic on N571/N877, the meeting noted from the statistics above that the existing use of L510 as a bypass for traffic bunching on P628 meant that an average of 0.31% of total traffic was involved and this amounted to a maximum of 3 flights per month on L510, with average over the 9 months of 2008 of about 1.8 flights per month.

2.9 The meeting considered that this was a low traffic flow on L510 and that using L510 as a bypass for N571/N877 as well as for P628 was very unlikely to overload L510, particularly as it was not anticipated that the total number of flights subject to ATFM procedures would increase significantly. Rather than increased numbers of flights overall, the availability of additional UL333 and B466 capacity through Kabul FIR could have the effect of redistributing traffic away from other ATFM routes and onto N571/N877, with consequent reduction in bunching circumstances on either P628 or N571/N877.

India Update

2.10 In relation to the need for a connector route for L510 bypass traffic to rejoin N877 in Indian FIRS, ATFM/TF/12 had noted that the existing route structure in India already had some possibilities that could perhaps be considered, notably L301 DOGEM to VVZ and G472/N895 EKADI to NAGPUR.

2.11 As India had been unable to attend the ATFM/TF/12 meeting, the Regional Office had drawn the attention of India to the outcomes of ATFM/TF/12 via letter (Ref:T3/8.13.2: AP-ATM0215, dated 25 July 2008) requesting that India consider authorizing use of existing route structures to provide bypass capacity from L510 to N877 for traffic during the ATFM hours of operation. Regional Office had also taken advantage of the presence of delegations from India,

Malaysia, Singapore, Thailand and IATA during the September 2008 APANPIRG/19 meeting to conduct a side meeting to progress these matters.

2.12 Following consideration of the proposals, India advised the meeting via email to Regional Office that the use of L510 for N571/N877 bypass traffic as well as for P628 bypass traffic would add to traffic complexity in India and therefore India had some reservations about the proposal. India proposed alternative solutions that involved redirection of traffic away from N571 onto B466 and P574 in the Kula Lumpur and Jakarta FIRs.

2.13 The meeting discussed that the alternative proposals from India at length, as well as a number of other possibilities arising, but concluded that added complexity easily outweighed any benefits from such proposals. Accordingly, such proposals were not suitable for adoption.

UL333/B466 Outcomes

2.14 In considering the situation, the meeting noted the following points in relation to feeding the increased capacity available in Kabul FIR as a result of the implementation of UL333 extension and removal of flight planning restrictions on B466:

- a) The present Malaysia NOTAM A2364 placed flight planning restrictions that unduly disadvantaged flights from South-East Asia, particularly via N571/N877, and such restrictions should be lifted as soon as possible,
- b) Realignment of routes as described in Malaysia AIP Supplement 36/2008 was supported,
- c) Notwithstanding the absence of connector route between L510 and N877 in Chennai FIR, the implementation of conditional route Y338 in Kuala Lumpur FIR as described in Malaysia AIP Supplement 37/2008 was supported. Kuala Lumpur ACC retained full control of the 'conditional' aspects of this route, so the conditional route could not be used unless cleared by KL ACC,
- d) Traffic flows along L510 resulting from need to bypass P628 traffic were documented over the 9 months of 2008 so far and comprised a maximum of 3 flights/month, minimum of zero flights/month and average of 1.8 flights/month,
- e) India expressed reservations about authorizing L510 as bypass for N571/N877 in addition to bypass for P628 as this would introduce traffic complexity in India,
- f) Alternate proposals to divert N571 traffic via B466 and P574 in Kuala Lumpur and Jakarta FIRs would introduce significant additional complexity in eastern Bay of Bengal and would not be pursued.

2.15 Having reached an impasse, the meeting recognized that the traffic bunching experienced in Kuala Lumpur arose as a result of the need to achieve the slot times for entry Kabul issued as part of the BOBCAT metering – i.e. if the slot times were not respected, traffic bunching could be solved by ATC tactical interventions in the normal way.

2.16 In this context, and after significant deliberation, the meeting considered that to solve the impasse described above and allow traffic from South-East Asia to access the additional route capacity in Kabul FIR, the traffic feed into UL333 SERKA – SOKAM would be withdrawn from the ATFM procedures. This would have the effect of leaving the traffic flows on N571/N877 from South-East Asia unmetered across the Bay of Bengal and India, with consequent complexity for

ANSPs enroute. Accordingly, ANSPs would be required to utilize normal ATC tactical interventions for these flights to solve traffic conflicts but without fear of causing a flight to miss a slot time for entry Kabul because such a slot would not be allocated.

Future Directions

2.17 Accordingly, the meeting agreed to the following steps:

- 1) Regional Office would request all States affected by the ATFM procedures to issue a NOTAM (see **Appendix F** for model NOTAM text) advising that UL333 SERKA – SOKAM is withdrawn from the ATFM procedures, but B466 SERKA – PAROD is retained,
- 2) BOBCAT software, ATFM Users Handbook to be modified to remove SERKA – SOKAM requirements, retain SERKA – PAROD,
- 3) Malaysian AIP Supplements 36/2008 and 37/2008 to proceed as written and scheduled,
- 4) Malaysia to issue NOTAM to replace existing NOTAM A2364 notifying that N571/N877 are not subject to ATFM and these routes can be planned (see **Appendix G** for model NOTAM text),
- 5) Regional Office to draw attention of India to outcomes of the SCM ATFM SEA Routes, noting that ATFM/TF is still very interested to obtain approval from India to use existing routes in India as connector route from L510 to N877 to accept occasional bypass traffic during nightly ATFM hours in order to enable UL333 traffic flows to be BOBCAT metered, and
- 6) Regional Office to draw the attention of India to a number of other matters arising from the ATFM/TF/12 meeting that are still outstanding.

Agenda Item 3: Other ATFM Route Issues

3.1 The meeting recalled that during ATFM/TF/9 (January 2007), Thailand and India agreed in principle to use M770 as a bypass route when a traffic bunching situation occurred on L759. Flights affected by the bunching would be re-routed to M770 and rejoin L759 over the Indian continent. The matter had been discussed in subsequent ATFM/TF meetings, but ATFM/TF/12 noted that little progress had been made towards implementing appropriate procedures between Thailand, Myanmar and India to address the situation. Noting the urgency of the situation, ATFM/TF/12 had agreed that:

- a) Thailand continue coordination with India (Kolkata FIR) to attempt to implement the bypass procedures,
- b) The Regional Office bring the matter to the attention of India and seek the urgent implementation of the procedures in accordance with the agreements previously given by India as recorded in the Report of ATFM/TF/9,
- c) In the event that the bypass procedures between Bangkok FIR and Kolkata FIR could not be implemented by AIRAC 23 October 2008, Thailand would publish NOTAM advising of ATFM bunching issue in Bangkok FIR and requiring flights

during the BOBCAT period to include in Field 18 of Flight Plan RMK/details of alternate route & level acceptable to be flown if flight was affected by a bunching situation.

3.2 Thailand updated the meeting that this matter had also been discussed during the APANPIRG/19 side meeting referred to in paragraph 2.11 above. India, Myanmar and Thailand were present during the APANPIRG/19 side meeting and had agreed that a 3-month trial of suitable procedures would commence as soon as procedures were finalized and documentation including updated operational LOAs was available. In light of this agreement, Thailand would not issue the NOTAM described in paragraph 3.1 c) above and would continue work with Myanmar and India to commence a suitable trial as soon as possible.

3.3 In light of the above, in coordination with India and Myanmar, Thailand had prepared a Draft AIC and NOTAM (**Appendix H** refers) in regard to the proposed utilization of M770 as a bypass route and had circulated the documents to India and Myanmar in early October for comment. Myanmar had agreed to the documentation and Thailand was waiting for a response from India.

Agenda Item 4: Any other business

4.1 The meeting recalled that at the ATFM/TF/12 meeting in Cairo, the meeting agreed to the nomination of the "Asia-Pacific ATFM Task Force" for the United States Air Traffic Control Association (US ATCA) 2008 Industrial Award. The ATCA Industrial Award is a medallion given to an industry or group of industries for an outstanding achievement or contribution which has added to the quality, safety or efficiency of air traffic control.

4.2 Thailand informed the meeting that a response had been received from USA ATCA in relation to the submission from ATFM/TF/12. Based on coordination with ATCA Officials, Thailand informed the meeting that the ATCA Awards Committee has selected the Asia-Pacific ATFM Task Force as the recipient of the 2008 ATCA Industrial Award. Presentation of the Award will take place on 4 November 2008 during the awards ceremony at the ATCA Annual Conference and Exhibition in Washington, DC.

4.3 In accordance with discussions in the ATFM/TF/12 meeting, AEROTHAI will be sending a small delegation to the ATCA Conference to accept the award on behalf of the Task Force. The delegation will consist of DGCA Thailand who is also Chairman of the AEROTHAI Board of Directors as well as up to three other AEROTHAI staff. Thailand congratulated all involved in the implementation of the long range international ATFM procedures, often referred to as BOBCAT procedures. Thailand considered that cooperation from the many parties concerned is the key to the success of this work and that the ATCA Industrial Award for 2008 recognized the continuous efforts of all parties associated with the work of the ATFM/TF.

4.4 The meeting was very appreciative to Thailand for relaying this news and thankful to the US ATCA for recognizing the collaborative work that had gone on between States and airspace users to achieve the results being demonstrated on a daily basis by the ATFM procedures. In congratulating all parties involved, the meeting recognized Thailand's excellent efforts in providing the basis for the development of the BOBCAT and establishing the ATFMU. As such, it was appropriate that the delegation from Thailand represent the ATFM/TF during the ATCA awards ceremony in early November. The meeting also recognized the role played by Mr. John Richardson, ATM Consultant to AEROTHAI from ATFM/TF/1 to ATFM/TF/11, and requested that the Regional Office contact him with news of the ATCA award.

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SCM ATFM SEA ROUTES

Appendix A

LIST OF PARTICIPANTS

STATE/NAME	DESIGNATION/ADDRESS	TEL/FAX/E-MAIL
INDONESIA		
Mr. Saeful Bahri	Deputy Director for Airspace Management Directorate of Air Navigation DGCA - Indonesia Gedung Karya Building 23 rd Fl. Jl. Medan Merdeka Barat No.8 Jakarta 10110 Indonesia	Tel: 62-21-350 6451 Fax: 62-21-350 7569 E-mail: saeful_bahri21@yahoo.co.id
Mr. Tavip Wibowo	Assistant Deputy Director for ATS Quality Assurances PT. Angkasa Pura I Kota Baru Bandar Kemayoran Blok B-12 Kav. No.2 Jakarta 10610 Indonesia	Tel: 62-21-6541961 ext 2312 Fax: 62-21-65866838 E-mail: tavip@angkasapura1.co.id tavipwibowo@yahoo.com
Mr. Ferry Suharlan	ACC Supervisor – Ujung Pandang Makassar ATS Center PT. Angkasa Pura I Hasanuddin Airport Makassar 90552 Indonesia	Tel: 62-411-4813718 Fax: 62-411-4813717 E-mail: maats@angkasapura1.co.id
Mr. Jonathan Bubun	PT (PERSERO) Angkasa Pura II Gedung 600 Lt.3 Soekarno-Hatta International Airport Jakarta 19101 Indonesia	Tel: 62-21-5506120 Fax: 62-21-5506106
Mr. Ronny Sudarsono	PT (PERSERO) Angkasa Pura II Gedung 600 Lt.3 Soekarno-Hatta International Airport Jakarta 19101 Indonesia	Tel: 62-21-5506120 Fax: 62-21-5506106
LAO PDR		
Mr. Somchit Vinitkeophavanh	Director General Lao Air Traffic Management Wattay International Airport P.O. Box 2985 Vientiane Lao PDR	Tel: 856 21 512006 Fax: 856 21 512216 E-mail: laoats@yahoo.com
Mr. Kounlath Manasavanh	Chief Air Traffic Services Center Lao Air Traffic Management Wattay International Airport P.O. Box 2985 Vientiane Lao PDR	Tel: 856 21 512006 Fax: 856 21 512216 E-mail: kounlath2005@yahoo.com
Mr. Bouakhao Khounphaya	Chief of Overflight and Landing Department of Civil Aviation Wattay International Airport P.O. Box 119 Vientiane Lao PDR	Tel: 856 21 51264 Fax: 856 21 520237 E-mail: laodca@laotel.com

SCM ATFM SEA ROUTES

Appendix A

STATE/NAME	DESIGNATION/ADDRESS	TEL/FAX/E-MAIL
MALAYSIA		
Mr. Tay Sween Boon	Deputy Director of KL ATCC Air Traffic Control Centre Department of Civil Aviation Sultan Abdul Aziz Shah Airport 47200 Subang, Selangor Malaysia	Tel: 603-78473573 Fax: 603-78473572 E-mail: taysboon@gmail.com
Mr. Richard Tan Hock Chye	Assistant Director of KL ATCC Air Traffic Control Centre Department of Civil Aviation Sultan Abdul Aziz Shah Airport 47200 Subang, Selangor Malaysia	Tel: 603-78473573 Fax: 603-78473572 E-mail: imbmrich@gmail.com
PHILIPPINES		
Mr. Michael Engles Mapanao	Chief Air Traffic Controller Manila Area Control Center Civil Aviation Authority of the Philippines Airways Facilities Complex MIA Pasay City Metro Manila Philippines	Tel: 632 851 0639 Fax: 632 851 0639 E-mail: mikeecho905@yahoo.com
Mr. Herminio Abaya Dario Jr.	Supervising Air Traffic Controller, Air Traffic Service Civil Aviation Authority of the Philippines MIA Pasay City Metro Manila Philippines	Tel: 632 879 9160 Fax: 632 879 9160 E-mail:
SINGAPORE		
Mr. Jeffrey Loke	Project Officer (Air Traffic Management) Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel: 65-6541 2463 Fax: 65-6545 6516 E-mail: loke_chee_yong@caas.gov.sg
Mr. Hermizan Jumari	Project Officer (Air Traffic Management) Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel: 65-6541 2464 Fax: 65-6545 6516 E-mail: hermizan_jumari@caas.gov.sg
Mr. Ying Weng Kit	Air Traffic Control Officer Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel: 65-6541 2686 Fax: 65-6545 6252 E-mail: ying_weng_kit@caas.gov.sg

SCM ATFM SEA ROUTES

Appendix A

STATE/NAME	DESIGNATION/ADDRESS	TEL/FAX/E-MAIL
THAILAND		
Flying Officer Nakorn Yoonpand	Air Traffic Control Expert Airport Standards and Air Navigation Facilitating Division Department of Civil Aviation 71 Soi Ngarmduplee, Rama IV Rd Bangkok 10120, Thailand	Tel: 66-2-287 0320-9 ext 1165 Fax: 66-2-286 8159
Mr. Tinnagorn Choowong	Director, Air Traffic Management Centre Aeronautical Radio of Thailand Ltd. 102 Ngarmduplee, Tungmahamek Sathorn, Bangkok 10120 Thailand	Tel: 66-2-287 8780 Fax: 66-2-287 8424 E-mail: tinnagorn.ch@aerothai.co.th
Mr. Piyawut Tantimekabut	Senior Systems Engineer Aeronautical Radio of Thailand Ltd 102 Ngamduplee Thungmahamek, Sathorn Bangkok 10120, Thailand	Tel: +66-2-287 8616 Fax: +66-2-285 8620 E-mail: piyawut.ta@aerothai.co.th piyawut@gmail.com
Ms. Supree Tumsaroch	Executive Officer Administration Aeronautical Radio of Thailand Ltd. 102 Ngamduplee Thungmahamek, Sathorn Bangkok 10120, Thailand	Tel: 66-2-287 8582
VIETNAM		
Mr. Nguyen The Hung	Deputy Director Air Navigation Department Civil Aviation Administration of Viet Nam 119 Nguyen Son Long Bien District Hanoi The Socialist Republic of Viet Nam	Tel: 84-4-8723 600 Fax: 84-4-8274 194 E-mail: hungand@caa.gov.vn hungand_caav@yahoo.com
Mr. Tran Xuan Son	Manager of ATS Section ATS-AIS Division/VANSCORP Hanoi The Socialist Republic of Viet Nam	Tel: +84-4-8725271
Mr. Mai Ngoc Cu	Acting Chief, ATS Section Northern ATS Centre/VANSCORP Hanoi The Socialist Republic of Viet Nam	Tel: +84-4-8866473
Mr. Tran Van Tuyen	Department Chief, ATS Division Northern ATS Center/VANSCORP Hanoi The Socialist Republic of Viet Nam	Tel: +84-4-8866473
IATA		
Mr. Soon Boon Hai	Assistant Director – Safety Operations & Infrastructure – Asia/Pacific International Air Transport Association 111 Somerset Road #14-05 Somerset Wing Power Building Singapore 238164	Tel: 65-6499 2251 Fax: 65-6233 9286 E-mail: soonbh@iata.org

SCM ATFM SEA ROUTES

Appendix A

STATE/NAME	DESIGNATION/ADDRESS	TEL/FAX/E-MAIL
Capt. Aric Oh	Deputy Chief Pilot (Technical) Singapore Airlines Limited Flight Operations Technical (SIN-STC 02-A) SIA Training Centre, 04C 720 Upper Changi Road East Singapore 486852	Tel : 65-6540 3694 Fax : 65-6543 4053 E-mail: aric_oh@singaporeair.com.sg
ICAO		
Mr. Andrew Tiede	Regional Officer, ATM ICAO Asia & Pacific Office 252/1 Vibhavadi Rangsit Road Chatuchak Bangkok 10900 Thailand	Tel: 66-2-537 8189 ext 152 Fax: 66-2-537 8199 E-mail: atiede@bangkok.icao.int

SCM ATFM SEA ROUTES
Appendix B

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

WORKING PAPERS

NUMBER	AGENDA	TITLE	PRESENTED BY
WP/1	1	Provisional Agenda for SCM ATFM SEA ROUTES	Secretariat
WP/2	2, 3	Extracts from the Report of ATFM/TF/12	Secretariat
WP/3	3	By Pass Procedure for ATS Route L759	Thailand
WP/4	3	Update on the Air Traffic Flow Management in Kuala Lumpur FIR	Malaysia

INFORMATION PAPERS

NUMBER	AGENDA	TITLE	PRESENTED BY
IP/1	-	List of Working Papers (WPs) and Information Papers (IPs)	Secretariat
IP/2	2	Malaysia AIS Information	Secretariat

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NOTAMN A2364

- A) WMFC
B) 0808280001 C) 0811192359

E) Afghanistan will implement a route segment UL333 between SERKA and SOKAM and remove westbound restrictions on B466 SERKA to PAROD in Kabul FIR WEF 28 Aug 2008. Concurrently, SERKA and PAROD will be added to the waypoints in Kabul FIR which are subject to BOBCAT ATFM procedures.

Measures are currently being considered by ICAO's ATFM Task Force to ensure that flights operating from South East Asian airports intending to use route segments between SERKA and SOKAM, and between SERKA and PAROD, during the period when ATFM procedures are in operation are not subject to undue ATC restrictions as a result of traffic bunching in the early stages of the flight within the Kuala Lumpur FIR.

Until these measures are in place, operators shall not flight plan to enter Kabul FIR at SERKA btn 2000UTC and 2359UTC via N571/N877, or via P628 unless able to operate at FL360 or above in Kuala Lumpur FIR.

AIP SUPPLEMENT MALAYSIA

PHONE : 6-03-8871 4000
TELEX : PENAWA MA 30128
FAX : 6-03-8881 0530
AFTN : WMKKYAYS
COMM : AIRCIVIL
KUALA LUMPUR

AERONAUTICAL INFORMATION SERVICES
DEPARTMENT OF CIVIL AVIATION
NO. 27, PERSIARAN PERDANA
LEVEL 1-4, PODIUM BLOCK, PRECINCT 4,
62618 PUTRAJAYA
MALAYSIA

36 / 2008

11 SEP

AIRAC

REALIGNMENT OF RNP10 RNAV ROUTES P628, L510 AND N571 IN KUALA LUMPUR FLIGHT INFORMATION REGION

1. INTRODUCTION

- 1.1 The purpose of this AIP Supplement is to inform operators of the realignment of RNP10 RNAV Routes P628, L510 and N571 with effect from 0000 UTC on 20 November 2008.
- 1.2 The realignment of these routes is to allow Air Traffic Flow Management (ATFM) westbound flights on P628 during the period of 1500UTC and 1900UTC at GIVAL and/or N571 during the period of 1530UTC and 1930UTC at VAMPI to be rerouted onto L510 when traffic congestion occurs on P628 and/or N571. These flights will have access to more optimum levels when established on L510.
- 1.3 Though the procedures above on P628 are similar to those in AIP Malaysia page ENR 3.3-1 (L510-column 6, note 2) these realigned routes will allow flights early access to more optimum levels.

(Note: A conditional route Y338 will be established from VAMPI on N571 to join LEKIR on L510 through an AIP Supplement).

2. REALIGNMENT OF RNAV RNP10 ROUTES AND NEW WAYPOINTS

- 2.1 Details of the route realignment and seven new waypoints applicable within Kuala Lumpur FIR are shown in Appendix A1 to A3 and Appendix B.
 - a) DUKUN (07° 38' 56" N 097° 31' 09" E)
 - b) MAPSO (08° 03' 30" N 097° 12' 56" E)
 - c) MINAT (08° 46' 18" N 096° 01' 31" E)
 - d) LEKIR (07° 16' 32" N 096° 52' 43" E)
 - e) IDKUT (08° 00' 17" N 095° 30' 17" E)
 - f) MEKAR (06° 30' 14" N 096° 29' 28" E)
 - g) NILAM (06° 45' 23" N 095° 58' 35" E)

SCM ATFM SEA ROUTES
Appendix D

2.2 The following waypoints will be deleted upon implementation of the realigned RNP10 Routes:

- (a) AGELO (08° 00' 07" N 095° 21'46" E)
- (b) RIPSO (07° 22' 04" N 097° 02'19" E)
- (c) DOVUM (06° 47' 35" N 096° 02'34" E)
- (d) IBALI (08° 39' 52" N 095° 51' 27" E)
- (e) OLSEL (08° 01' 55" N 096° 42'36" E)
- (f) UXARA (07° 32' 20" N 097° 20'11" E)

3. IMPLEMENTATION DATE

3.1 This AIP Supplement becomes effective at 0000UTC on 20 November 2008. A trigger NOTAM will be issued on 07 November 2008 notifying the effective date of implementation.

4. APPENDICES

4.1 Appendix A1 to A3: Lower and Upper Level of ATS routes.

4.2 Appendix B: Chart depicting ATS route structure.

5. CANCELLATION

5.1 This AIP Supplement will remain current until the information is published in AIP Malaysia.

DATO' AZHARUDDIN ABDUL RAHMAN
Director General
Department of Civil Aviation
Malaysia

SCM ATFM SEA ROUTES
Appendix D

APPENDIX A - 1

ATS ROUTES

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper limits Lower limits Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)	Lateral Limits (NM)	Cruising levels		Remarks Controlling unit
				Odd	Even	
1	2	3	4	5		6
A327						
▲ RUSSET (FIR BDRY) 074616N 0974257E	240° 060° 14 NM	FL 460 FL 245 MNM FL 250	50	↓		15 mins longitudinal separation. Lateral Limits : 25 NM either side of track. Controlling Authority : Kuala Lumpur ACC (P) 133.4 MHz, (S) 132.55 MHz
▲ DUKUN 073856N 0973109E	240° 060° 44 NM					
▲ LEKIR 071632N 0965243E	240° 060° 62 NM					
▲ NILAM 064532N 0955835E	240° 060° 21 NM					
▲ SANOB 063510N 0954009E	240° 060° 41 NM					
▲ IGEBO 061409N 0950451E	240° 060° 28 NM					
▲ POVUS (FIR BDRY) 060000N 0943958E						
L645 (RNP 10)						
▲ SAPAM (FIR BDRY) 080434N 0973300E	267° 087° 20 NM	FL 460 FL 255 MNM FL 260	20	↑		Longitudinal Separation of 10 mins between RNAV equipped acft. applying Mach Number Technique. Controlling Authority : Kuala Lumpur ACC: (P) 133.4 MHz, (S) 132.55 MHz
▲ MAPSO 080330N 0971256E	267° 087° 102 NM					
▲ IDKUT 080017N 0953007E	267° 087° 65 NM					
▲ SAMAK (FIR BDRY) 075842N 0942500E						

Changes : ATS Route A327 Ops levels restrictions eastbound and westbound removed

SCM ATFM SEA ROUTES
Appendix D

APPENDIX A - 2

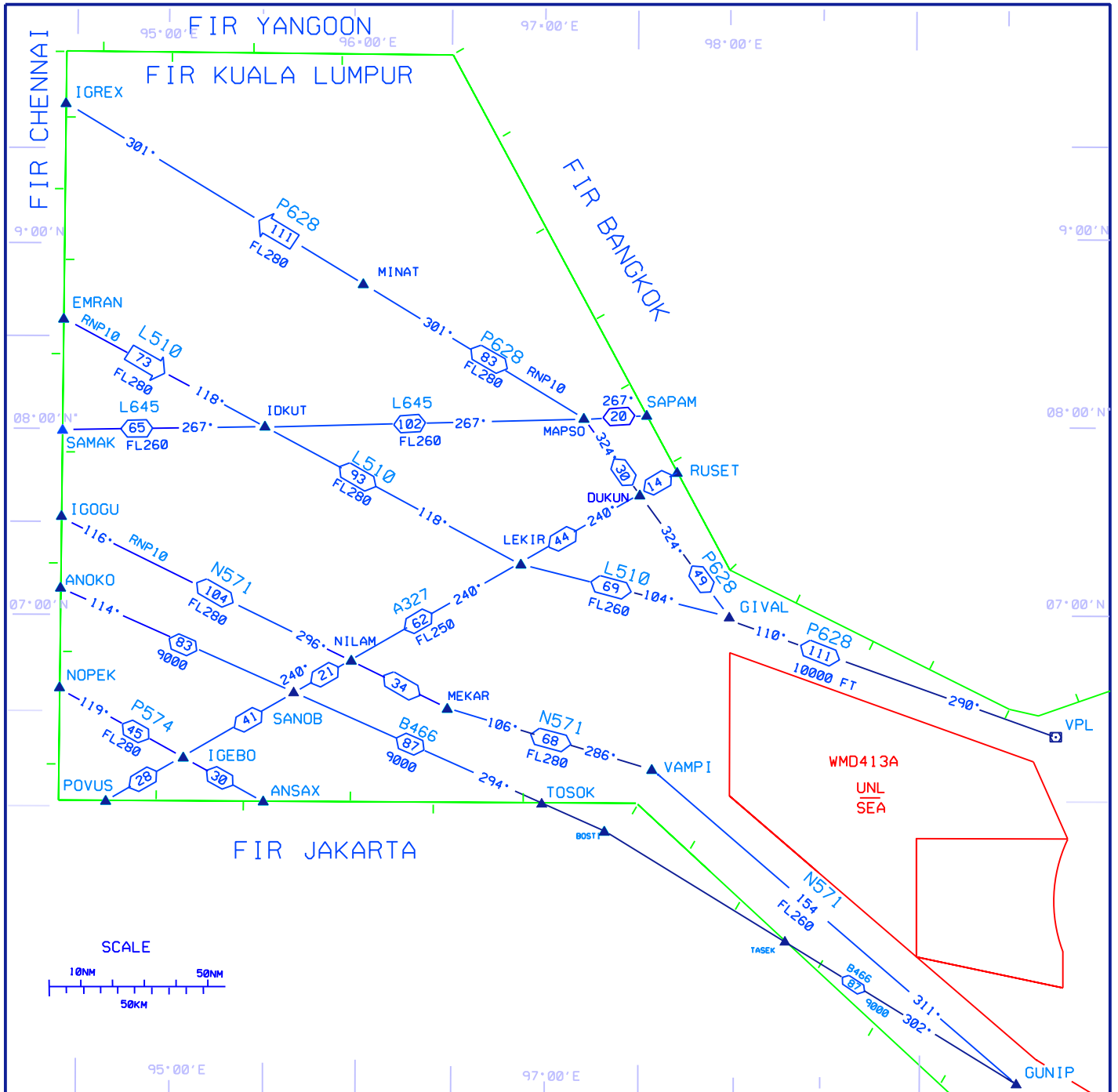
Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper limits Lower limits		Lateral Limits (NM)	Cruising levels		Remarks Controlling unit
		Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)			Odd	Even	
1	2	3		4	5		6
L510 (RNP 10)							
▲ EMRAN 083430N 0942500E ▲ IDKUT 080017N 0953017E ▲ LEKIR 071632N 0965243E ▲ GIVAL 070000N 0980000E	298° 118° 73 NM	FL 460 FL 275	20	↓		Longitudinal separation of 10 mins btw RNAV equipped acft applying Mach Number Technique. Note1: Unidirectional Eastbound – 24 hrs, daily Note 2: When successive AFTM westbound flights flight planned on P628 arriving GIVAL between period 1500 and 1900UTC do not meet the required longitudinal separation requirements, some of these flights may be rerouted onto this ATS route by KL ACC to allow the allocation of more optimal flight levels Note 3: Operators should not flight plan westbound on L510. Controlling Authority: Kuala Lumpur ACC – 133.4 MHZ	
	298° 118° 93 NM	MNM FL 280					
	284° 104° 69 NM	FL 460 FL 255					
		MNM FL 260					
N571 (RNP 10)							
▲ GUNIP 042953N 0993150E ▲ VAMPI 061056N 0973508E ▲ MEKAR 063014N 0962928E ▲ NILAM 064523N 0955836E ▲ IGOGU (FIR BDRY) 073101N 0942500E	311° 131° 154 NM	FL 460 FL 275 MNM FL 280	20	↓		Longitudinal Separation of 10 mins between RNAV equipped acft. applying Mach Number Technique. Uni-Directional Routing System (Refer ENR 1.9 - 5 and ENR 1.9-8) No Pre Departure Coordination (No PDC) arrangement : Flights departing from WMSA/WMKK/WSSS will be cleared to FL280. Succeeding acft cleared to same cruising level shall be provided at least 10 mins longitudinal separation with no closing speed. Additional longitudinal separation shall be provided by ATC for faster acft following the slower acft on the same route. Controlling Authority : Kuala Lumpur ACC (P) 133.4 MHz, (S) 132.55 MHz	
	286° 106° 68 NM						
	296° 116° 34 NM						
	296° 116° 104 NM						

SCM ATFM SEA ROUTES
Appendix D

APPENDIX A - 3

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper limits Lower limits		Lateral Limits (NM)	Cruising levels		Remarks Controlling unit
		Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)			Odd	Even	
1	2	3		4	5		6
P628 (RNP 10)							
▲ IGREX (WMFC/VOMF BDRY) 094328N 0942500E ▲ MINAT 084618N 0960131E ▲ MAPSO 080330N 0971256E ▲ DUKUN 073856N 0973109E ▲ GIVAL 070000N 0980000E ▲ LANGKAWI DVOR/DME (VPL) 062119.5N 0994450.6E	301°	$\frac{\text{FL 460}}{\text{FL 275}}$ MNM FL 280	20				Longitudinal Separation of 10 mins between RNAV equipped acft. applying Mach Number Technique. Note 1 : Unidirectional Westbound between GIVAL and IGREX - 24 hrs daily. Note 2 : Bi-directional between VPL and GIVAL - 24 hrs daily. Note 3: All westbound flights on P628 which are not subject to ATFM measures when transiting through KL FIR to destinations in South Asia, Middle East and Europe are required to file their FPL as follows: (1) FL360 or above for flights estimates IGREX btn 1600 and 1930 UTC. Flights which are unable to comply during these periods are advised to use an alternate route. Controlling Authority : Kuala Lumpur ACC (P) 133.4 MHz, (S) 132.55 MHz
	111 NM						
	301°						
	83 NM						
	324°						
	30 NM						
324°	$\frac{\text{FL 460}}{10\ 000\ \text{FT}\ \text{ALT}}$	20					
49 NM							
290°							
110°							
111 NM							

P628 L510 N571 REALIGNMENT



AIP SUPPLEMENT MALAYSIA

PHONE : 6-03-8871 4000
TELEX : PENAWA MA 30128
FAX : 6-03-8881 0530
AFTN : WMKKYAYS
COMM : AIRCIVIL
KUALA LUMPUR

AERONAUTICAL INFORMATION SERVICES
DEPARTMENT OF CIVIL AVIATION
NO. 27, PERSIARAN PERDANA
LEVEL 1-4, PODIUM BLOCK, PRECINCT 4,
62618 PUTRAJAYA
MALAYSIA

37 / 2008

11 SEP

AIRAC

ESTABLISHMENT OF CONDITIONAL ATS ROUTE Y338 BETWEEN VAMPI AND LEKIR IN KUALA LUMPUR FLIGHT INFORMATION REGION

1. INTRODUCTION

- 1.1 The purpose of this AIP Supplement is to notify the establishment of conditional ATS route Y338 between VAMPI and LEKIR with effect from 1530 UTC on 20 November 2008

2. ESTABLISHMENT OF CONDITIONAL ATS ROUTE Y338

- 2.1 Details of the ATS route Y338, applicable within the Kuala Lumpur FIR are shown in Appendix A –Lower and Upper Limit of ATS route and Appendix B – Chart depicting ATS route.
- 2.2 ATS route Y338 is established as a uni-directional westbound route available during the period between 1530 UTC and 1930 UTC at VAMPI.
- 2.3 The purpose of establishing this westbound route and allowing the conditional use by westbound flights within the specified hours above is to alleviate the separation problems caused by bunching of flights during the nightly operational hours of Air Traffic Flow Management (ATFM) procedures. ATFM flights entering Kabul FIR via SERKA flight planned and operating on N571/ N877 may be diverted to L510 via Y338 by ATC when required, in order to achieve the required lateral separation when procedural longitudinal separation cannot be achieved on the flight planned route.

Note: *The conditional westbound availability of L510 is meant to be used by ATC only in traffic bunching situations to assist flights subject to ATFM to achieve the required separation and therefore operators should not flight plan westbound on this route.*

3. IMPLEMENTATION DATE

- 3.1 This AIP Supplement becomes effective at 1530 UTC on 20 November 2008. A trigger NOTAM will be issued on 07 November 2008 notifying the effective date of implementation.

SCM ATFM SEA ROUTES
Appendix E

4. CANCELLATION

- 4.1 This AIP Supplement will remain current until the information is published in AIP Malaysia.

DATO' AZHARUDDIN ABDUL RAHMAN
Director General
Department of Civil Aviation
Malaysia

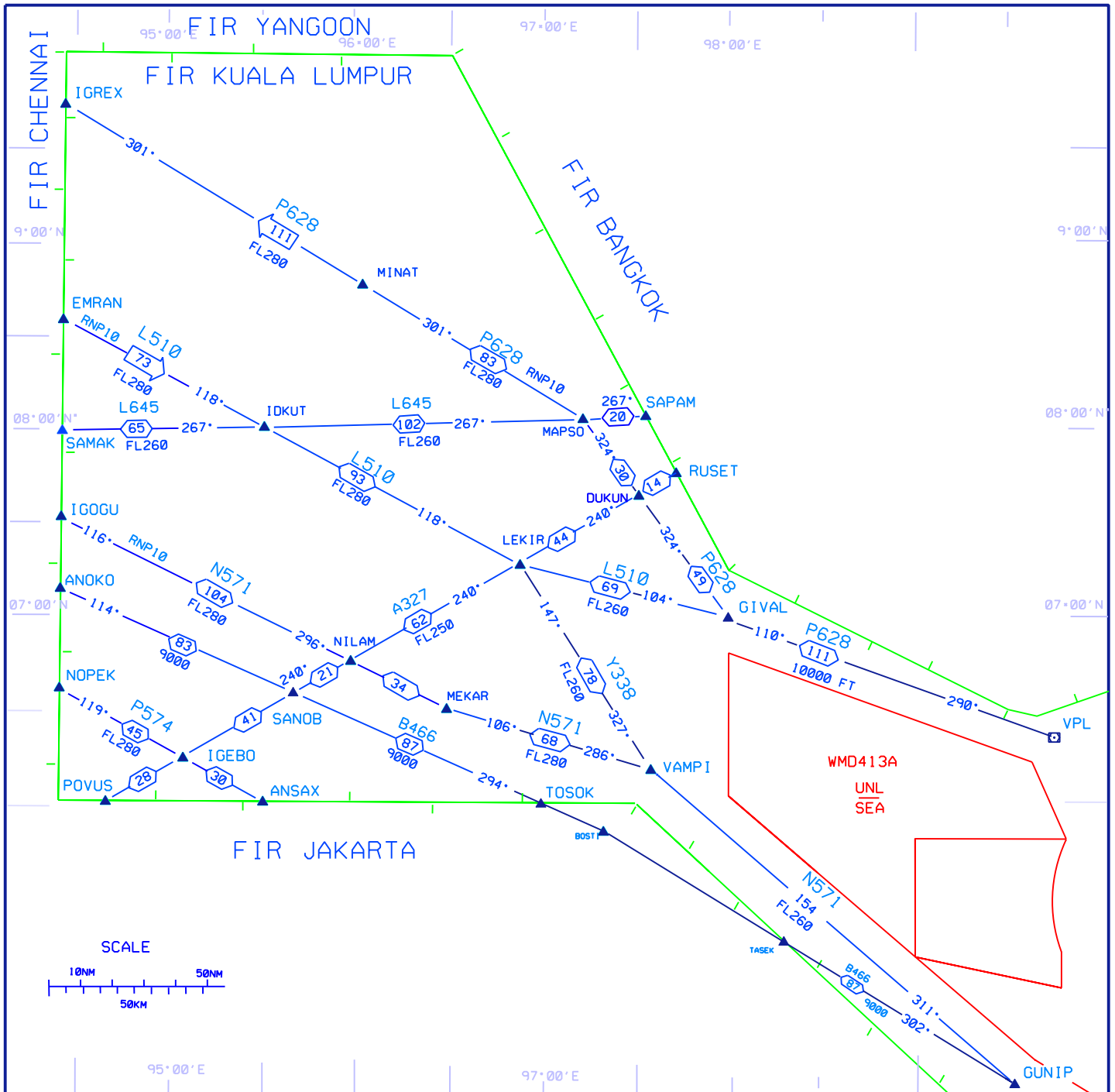
SCM ATFM SEA ROUTES
Appendix E

APPENDIX A

ESTABLISHMENT OF ATS ROUTE Y338

Route Designator Significant Points Coordinates	Track (MAG) DIST (NM)	Upper limits Lower limits		Lateral Limits (NM)	Cruising levels		Remarks Controlling unit
		Minimum Flight Altitude Airspace Classification (Refer to ENR 1.4-1)			Odd	Even	
1	2	3		4	5		6
Y338 (Conditional Route)							
▲ LEKIR 071632N 0965243E ▲ VAMPI 061056N 0973508E	298° 118°	FL 460 FL 255	20				<p><u>Note 1:</u> Unidirectional westbound between 1530 and 1930 UTC at VAMPI</p> <p><u>Note 2:</u> When successive ATFM westbound flights flight planned on N571/N877 arriving VAMPI b/n 1530 UTC and 1930UTC do not meet the required longitudinal separation requirements, some of these flights may be re-routed onto L510 via Y338 by KL ACC to allow the allocation of more optimal flight levels.</p> <p>Controlling Authority: Kuala Lumpur ACC – 133.4 MHZ</p>
	73 NM	MNM FL 260				↑	

ESTABLISHMENT OF CONDITIONAL ATS ROUTE Y338



Model NOTAM Text

All ATFM States to issue to notify non availability of ATFM procedures on SERKA UL333 SOKAM, but retain ATFM procedures on SERKA B466 SOKAM – effective from AIRAC 20 November 2008.

NOTAM Axxxx

- A) **XXXX**
B) **YYMMDDHHMM** C) **PERM**

E) PROVISIONS OF AIR TRAFFIC FLOW MANAGEMENT (ATFM) ARE EXPANDED TO INCLUDE AN ADDITIONAL KABUL FIR ENTRY POINT AT SERKA FOR ROUTE SERKA B466 PAROD.

ALL WESTBOUND FLIGHTS INTENDING TO ENTER THE KABUL FIR BETWEEN 2000UTC AND 2359UTC DAILY ON ATS ROUTE B466 BTN SERKA AND PAROD FROM F310 TO F390 INCLUSIVE SHALL COMPLY WITH ATFM PROCEDURES INCLUDING MANDATORY REQUIREMENT TO OBTAIN ATFM SLOT ALLOCATION FROM BANGKOK ATFMU.

NOTE THAT NO SLOT ALLOCATION IS REQUIRED FOR WESTBOUND FLIGHTS ROUTING VIA SERKA UL333 SOKAM. AMEND AIP SUP NN/NN.....

Model NOTAM Text

Malaysia to issue as NOTAM to update/replace existing Malaysia NOTAM A2364 - effective from AIRAC 20 November 2008.

- A) **WMFC**
B) **0811192359** C) **PERM**

E) As a result of deliberations by the ICAO ATFM/TF, flight planning restrictions for N571/N877 are amended. There are no ATFM requirements or flight planning restrictions for flights via N571/N877 entering Kabul FIR at SERKA then UL333 to SOKAM. However, to avoid conflicts with flights subject to ATFM procedures, during nightly hours of ATFM procedures flights shall not flight plan via N877 to enter Kabul FIR at SERKA then B466 to PAROD.

**Model text for AIS information for implementation of bypass procedures
for L759 using M770 between Bangkok, Yangon and Kolkata FIRS**

DRAFT AIC

1. Introduction

Bypass procedure to alleviate bunching of flights on L759 over the Bay of Bengal during the ATFM period

- 1.1 The ATFM/TF recognized that the contributory elements of flights bunching comprise:
 - 1.1.1 BOBCAT system allocates AWUTs based on the spacing at Kabul entry points ;
 - 1.1.2 The differences in EET; and
 - 1.1.3 The limited westbound level availability (FL280, 300 and 340) in addition to an inadequate performance of most aircraft to climb to higher level at an early stage of flight.
- 1.2 The bunching was caused by flights with near AWUT proximity having to operate on the same routes in the initial stages of their flights over the Bay of Bengal outside of radar coverage thus exceeding the capacity of a particular route resulting in enroute holding or unacceptable available flight level.
- 1.3 In order to alleviate traffic bunching on L759 during the ATFM period for flights under ATFM procedure over the Bay of Bengal, a trial of ATS re-route procedure shall be cooperatively conducted by Bangkok, Kolkata and Yangon ACCs in accordance with the agreed procedure as recorded under the auspicious of ICAO Asia and Pacific office, in The Combined Meeting of FITBOB/8, ATFM/TF/9 & BBACG/18 (Bangkok, Thailand, 22 to 26 January 2007) as well as the Coordination Meeting of the ATFM core team during APANPIRG/19 (Bangkok, Thailand, 3 Sep 08).
- 1.4 Flights under ATFM procedure that are unable to maintain 80NMs longitudinal separation in relation to preceding traffic from PUT until BBS or accept other available levels on L759 shall be re-routed by Bangkok ACC to proceed on M770 via:
“PUT L515 OBMOG M770 BUBKO N895 BBS then re-join L759”

2. Conditions in which M770 be utilized as a Bypass route

- 2.1 If the 80 NM longitudinal separation cannot be achieved or maintained in relation to preceding traffic on the flight planned route L759 from PUT until BBS over the Bay of Bengal ;
- 2.2 When, by using the flight planned route L759 an aircraft would suffer an unacceptable lower flight level;
- 2.3 In concurrence with the flight crew, the BACC shall assign the alternative parallel route M770 or lower acceptable flight level on L759 to affected flights enabling a better chance of obtaining the ATFM allocated flight level and time into the Kabul FIR

3. Effective Date

- 3.1 The effective date of the above procedure shall be accordingly notified by a trigger NOTAM,
- 3.2 Once, the operational trial has been successfully established, the L759 re-route procedure shall be permanently published in concerned States' AIP.

4. Operators Involvement

- 4.1 Flight crews and dispatchers are encouraged to become fully conversant with the L759 re-route procedure and are advised to take appropriate proceedings to enable affected flights to proceed on M770 when necessary.

.....

DRAFT NOTAM

BYPASS PROCEDURE TO ALLEVIATE BUNCHING OF FLIGHTS ON L759 OVER THE BAY OF BENGAL DURING THE ATFM PERIOD

FROM XXXX UTC XX MONTH 2008, A 3 MONTHS RE-ROUTE PROCEDURE TRIAL SHALL BE COOPERATIVELY IMPLEMENTED WITHIN THE BANGKOK, KOLKATTA AND YANGON FIR IN ORDER TO ALLEVIATE TRAFFIC BUNCHING ON L759 DURING THE ATFM PERIOD (AIC XX XXXX REFERS).

FLIGHTS UNDER ATFM PROCEDURE THAT ARE UNABLE TO MAINTAIN 80 NM LONGITUDINAL SEPARATION IN RELATION TO PRECEDING TRAFFIC ON L759 FROM PUT UNTIL BBS OR ACCEPT OTHER AVAILABLE LEVELS SHALL BE RE-ROUTED BY BANGKOK ACC TO PROCEED ON M770 VIA:

“PUT L515 OBMOG M770 BUBKO N895 BBS THEN RE-JOIN L759”
