



International Civil Aviation Organization

**The Sixteenth Meeting of the Regional Airspace Safety Monitoring
Advisory Group (RASMAG/16)**

Bangkok, Thailand, 20 – 24 February 2012

**Agenda Item 5: Airspace Safety Monitoring Activities/Requirements in Asia/Pacific
Region**

**UPDATED ESTIMATE OF RVSM LONG TERM HEIGHT MONITORING BURDEN
FOR THE AUSTRALIAN AIRSPACE MONITORING AGENCY (AAMA)**

(Presented by Australia)

SUMMARY

This paper presents the current expected monitoring burden for aircraft registered and operated by Australia, Indonesia, the Solomon Islands and Papua New Guinea to meet a target of end of November 2012 to complete the first round of monitoring to meet Annex 6 requirements.

Strategic Objectives:

A: *Safety – Enhance global civil aviation safety*

Global Plan Initiatives:

GPI-2 Reduced vertical separation minima

1. Introduction

1.1. The Long Term Height Monitoring Impact Statement developed by RASMAG was endorsed by APANPIRG/20 in September 2009. That statement included a determination by each of the Asia/Pacific Regional Monitoring Agencies (RMAs) of the anticipated monitoring burden for each State within the region. RASMAG/12 tasked the RMAs to review and update that data and subsequent meetings have seen RMAs report accordingly. The Australian Airspace Monitoring Agency (AAMA) last provided anticipated monitoring burden data in WP/25 at RASMAG/14. This current paper provides an update to that data.

2. Discussion

2.1 The AAMA has previously supplied data on its anticipated monitoring burden following the implementation of long term height monitoring in November 2010. The data was based on a review of the current RVSM approvals data for the State airspaces that the AAMA is responsible for, taking into account completed successful monitoring activity.

2.2 A review of the most recent RVSM approvals databases maintained by the AAMA determined that the total number of RVSM approved aircraft totalled 816 as at February 2012. The data shows that of this total, 297 (36%) of the aircraft have been successfully monitored since November 2010. Additionally, of the number successfully monitored, 247 (83%) of these have been monitored using ADS-B data.

2.3 Applying the minimum monitoring requirements (MMR) to the total of approved aircraft results in a total monitoring burden to be achieved by Nov 2012 of 243 aircraft. Taking into account the aircraft already successfully monitored, the current outstanding burden is 174 aircraft, comprising 103 Australian registered, 68 Indonesian registered, 2 Papua New Guinea registered, and 1 Solomon Islands registered. The AAMA may be able to reduce the burden in the short term, based on currently equipped ADS-B aircraft, by a further 2 Australian registered aircraft and by 11 Indonesian aircraft. This activity will establish a current burden that will possibly need to be EGMU monitored of 161 by end of November 2012.

2.4 Appendix A provides details of the monitoring burden based on the minimum monitoring requirements.

3. Actions by the Meeting

3.1 The meeting is invited to:

- a) review the information provided in the paper and Appendix A;
- b) consider the impact the burden may have on the targeted Annex 6 requirements for November 2012;
- c) use the information to update the current monitoring burden anticipated for the Asia/Pacific RMAs.

Appendix A: Estimated RVSM Monitoring Burden for Asia/Pacific Region as a result of Long Term Height Monitoring Requirements of Annex 6
- Period from Nov 2010 to Nov 2012

(Data estimated by Asia/Pacific RVSM Regional Monitoring Agencies)

AAMA Monitoring Burden (compiled February 2012)

AUSTRALIA:

Operator	Operator Name	Aircraft Monitoring Group (e.g. [A342, A343])	MMR Category (1, 2 or 3)	Total # Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Aircraft Remaining To Be Monitored By 30/11/12
AGC	STRATEGIC AIRLINES PTY. LTD.	A320	1	3	2	2
		A330	1	1	1	0
ANO	AIR NORTH	E170-190	1	3	2	2
IGA	SKYTRADERS PTY LTD	A320	1	1	1	1
	AIR NATIONAL AUSTRALIA PTY. LTD.	BD700	2	1	1	1
	TATARY PTY. LTD.		2	1	1	1
	GAMBAMORA INDUSTRIES PTY LTD	BE30	2	1	1	1
	STATE OF QUEENSLAND		2	1	1	1
	BUSINESS AVIATION SOLUTIONS PTY LTD	BE40	2	3	2	2
	MORGAN & CO	C25A	2	1	1	1
	CCJ PTY LTD	C510	2	1	1	1
	ERCEG, Ivan		2	1	1	1
	FLIGHT OPTIONS (AUSTRALIA) PTY LTD		2	2	2	2
	SINGAPORE FLYING COLLEGE PTE LTD		2	4	3	2
	SKYPAC AVIATION PTY LTD		2	1	1	1
	CELIJET AVIATION SOLUTIONS PTY LTD	C525	1	2	2	2
	DICK SMITH ADVENTURE PTY LTD		1	1	1	1
	EDWARDS COACHES PTY. LIMITED		1	1	1	1
	GOJET PTY. LTD.		1	1	1	1
	PROFESSIONAL JET AVIATION PTY LTD		1	1	1	1
SOUTHERN AIR SERVICES PTY LTD	1		1	1	1	
CHINA SOUTHERN WEST AUSTRALIAN FLYING COLLEGE PTY LTD	C550-552	2	1	1	1	
EXECUTIVE AIRLINES PTY LTD		2	1	1	1	
MACARTHUR JET CHARTER PTY LTD		2	1	1	1	
MACHJET INTERNATION PTY LTD		2	1	1	1	

Operator	Operator Name	Aircraft Monitoring Group (e.g. [A342, A343])	MMR Category (1, 2 or 3)	Total # Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Aircraft Remaining To Be Monitored By 30/11/12
IGA	MAXEM AVIATION PTY LTD		2	1	1	1
	PROFESSIONAL JET AVIATION PTY LTD		2	3	2	2
	FLIGHT OPTIONS (AUSTRALIA)	C560	1	1	1	1
	HEATHGATE RESOURCES PTY LTD		1	1	1	1
	JET CITY PTY. LTD.		1	1	1	1
	MAXEM AVIATION PTY LTD		1	1	1	1
	BUSINESS AVIATION SOLUTIONS	C650	1	1	1	1
	INGHAMS ENTERPRISES PTY LIMITED		1	1	1	1
	LYNDEN AVIATION PTY LIMITED		1	1	1	1
	EXECUTIVE AIRLINES PTY. LTD.	C680	1	2	2	2
	TWENTIETH SUPER PACE NOMINEES PTY. LTD.		1	1	1	1
	BUSINESS AVIATION SOLUTIONS	C750	1	1	1	1
	JET CITY PTY. LTD.		1	1	1	1
	AIR NATIONAL AUSTRALIA PTY. LTD.	CL600	1	1	1	1
	AVWEST PTY LTD		1	1	1	0
	FALLBROOK PTY LTD		1	1	1	1
	HOLYPEAK PROPRIETARY LTD		1	1	1	1
	MAXEM AVIATION PTY LTD		1	1	1	1
	REVESCO AVIATION PTY LTD		1	1	1	1
	WELLARD AVIATION PTY LTD		1	1	1	1
	PIONEER AUSTRALIA PTY LTD	DA50	2	1	1	1
	MARCPAN CHARTER PTY. LTD.	E135-E145	1	1	1	0
	NETWORK AVIATION PTY LTD	F100	1	2	2	2
	FLIGHT OPERATIONS (AUST) PTY LTD	F900	1	1	1	1
	LLOYD AVIATION JET CHARTER PTY. LTD.		1	1	1	0
	TINKLER AVIATION PTY LTD		1	1	1	1
	BALMORAL AIR PTY. LTD.	F2TH	2	1	1	0
	SYDNEY JET CHARTER PTY LIMITED		2	1	1	0
AVWEST PTY LTD	GLEX	1	3	2	1	
EXEJUET AUSTRALIA PTY LIMITED		1	2	2	2	
GANDEL INVESTMENTS PTY. LTD.		1	1	1	0	

Operator	Operator Name	Aircraft Monitoring Group (e.g. [A342, A343])	MMR Category (1, 2 or 3)	Total # Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Aircraft Remaining To Be Monitored By 30/11/12
IGA	PRATT AVIATION PTY LTD WALKER AIR PTY LIMITED		1	2	2	1
	CROWN MELBOURNE LIMITED EXECUJET AUSTRALIA PTY LIMITED MARCPLAN CHARTER PTY. LTD.	GLF4	1	2	2	2
	CROWN MELBOURNE LIMITED LITTLE AVIATION PTY. LIMITED PACIFIC FLIGHT SERVICES PTY LTD	GLF5	1	1	1	1
	MARCPLAN CHARTER PTY. LTD. NANTAY PTY LTD RAMSAY AIRCHARTER PTY LIMITED REMOREX PTY LTD SHORTSTOP JET CHARTER PTY LTD STATE OF QUEENSLAND SUNDOWN PASTORAL CO PTY LTD SUNSHINE AIR SERVICES PTY LTD TATARY PTY. LTD.	H25B-800	1	1	1	1
			1	2	2	1
			1	1	1	0
			1	1	1	1
			1	1	1	1
			1	1	1	1
			1	1	1	0
			1	1	1	1
			1	1	1	1
	BOSTON L.H.F. PTY LTD	H25C	2	1	1	1
	AIR NATIONAL AUSTRALIA PTY. LTD. CAREFLIGHT (QLD) LIMITED JET CITY PTY. LTD. PACIFIC FLIGHT SERVICES PTY LTD PRATT AVIATION PTY LTD	LJ35-36	2	1	1	1
			2	1	1	1
			2	2	2	2
			2	1	1	1
			2	1	1	1
	CAREFLIGHT (QLD) LIMITED PACIFIC FLIGHT SERVICES PTY LTD SINGAPORE FLYING COLLEGE PTE LTD	LJ45	1	2	2	2
			1	1	1	1
		1	4	2	2	
EXECUJET AUSTRALIA PTY LIMITED	LJ60	1	1	1	1	
GOJET PTY. LTD. SYDNEY JET CHARTER PTY LIMITED	PRM1	1	1	1	1	
		1	1	1	1	
JST	JETSTAR AIRWAYS PTY LIMITED	A320	1	52	2	0
		A330	1	11	2	0
MIL	ROYAL AUSTRALIAN AIR FORCE	B737NX	1	4	2	0

Operator	Operator Name	Aircraft Monitoring Group (e.g. [A342, A343])	MMR Category (1, 2 or 3)	Total # Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Aircraft Remaining To Be Monitored By 30/11/12
		BE30	2	8	5	0
		C130	2	12	8	4
NJS	NATIONAL JET SYSTEMS PTY. LTD.	B712	1	11	2	2
OZW	SKYWEST AIRLINES (AUST) PTY LTD	A320	1	1	1	0
		F100	1	9	2	1
QFA	QANTAS AIRWAYS LIMITED	A330	1	18	2	0
		A380	2	12	8	0
		B737CL	1	22	2	2
		B737NX	1	49	2	0
		B744-10	1	14	2	0
		B744-5	1	16	2	0
		B767	1	27	2	0
RON	NAURU AIR CORPORATION	B737CL	1	3	2	2
TGW	TIGER AIRWAYS AUSTRALIA PTY LIMITED	A320	1	11	2	0
UTY	ALLIANCE AIRLINES PTY LTD	F70	2	2	2	1
		F100	1	16	2	1
VAU	VIRGIN BLUE INTERNATIONAL AIRLINES PTY LTD	B773	1	5	2	0
VOZ	VIRGIN BLUE AIRLINES PTY LIMITED	A330	1	2	2	0
		B737NX	1	60	2	0
		E170-190	1	19	2	0
GRAND TOTALS:				495	163	103

INDONESIA:

Operator	Operator Name	Aircraft Monitoring Group (e.g. [A342, A343])	MMR Category (1, 2 or 3)	Total # Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Aircraft Remaining To Be Monitored By 30/11/12
AFE	AIRFAST INDONESIA	B732	2	1	1	1
		E135-145	1	1	1	1
		MD80	1	3	2	2
AWQ	INDONESIA AIRASIA	A320	1	20	2	2
		B737CL	1	6	2	2

Operator	Operator Name	Aircraft Monitoring Group (e.g. [A342, A343])	MMR Category (1, 2 or 3)	Total # Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Aircraft Remaining To Be Monitored By 30/11/12
BTV	BATAVIA AIR	A320	1	9	2	2
		A330	1	2	2	2
		B737CL	1	26	2	2
		B737NX	1	1	1	1
CGR	CARDIG AIR CARGO	B737CL	1	2	2	2
DAN	DABI AIR NUSANTARA	C560	1	1	1	0
GIA	GARUDA INDONESIA	A320	1	3	2	2
		A330	1	13	2	0
		B737CL	1	25	2	2
		B737NX	1	49	2	0
		B744-10	1	2	2	2
		B744-5	1	1	1	1
IGA	EKSPRES TRANSPORTASI ANTARBENUA	E135-145	1	2	2	2
JLB	PT JHONLIN AIR TRANSPORT	H25B-800	1	1	1	1
KLS	KALSTAR AVIATION	B737CL	1	2	2	2
LNI	LION AIRLINES	B737CL	1	11	2	2
		B737NX	1	58	2	2
		B744-5	1	2	2	2
		MD80	1	1	1	1
		MD90	1	4	2	2
MNA	MERPATI NUSANTARA AIRLINES	B732	2	1	1	1
		B737CL	1	14	2	2
PAS	PELITA AIR SERVICES	F100	1	2	2	2
SJY	SRIWIJAYA AIRLINES	B732	2	13	8	8
		B737CL	1	17	2	2
TGN	TRIGANA AIR	B732	2	1	1	1
		B737CL	1	1	1	1
		B737NX	1	1	1	1
TMG	TRI-MG AIRLINES	B732	2	2	2	2
TRV	TREVIRA AIR	B737CL	1	1	1	1
		C560	1	1	1	1
		H25B-800	1	1	1	1

Operator	Operator Name	Aircraft Monitoring Group (e.g. [A342, A343])	MMR Category (1, 2 or 3)	Total # Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Aircraft Remaining To Be Monitored By 30/11/12
TWA	TRANSWISATA PRIMA AVIATION	F100	1	1	1	1
		PRM1	1	1	1	1
WON	WINGS AIR	MD80	1	5	2	2
XAR	TRAVEL EXPRESS AVIATION SERVICES	B732	2	2	2	2
		B737CL	1	4	2	1
GRAND TOTALS:				314	74	68

PAPUA NEW GUINEA:

Operator	Operator Name	Aircraft Monitoring Group (e.g. [A342, A343])	MMR Category (1, 2 or 3)	Total # Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Aircraft Remaining To Be Monitored By 30/11/12
ANG	AIR NIUGINI	B767	1	3	2	1
		F100	1	2	2	0
		F900	1	1	1	1
GRAND TOTALS:				6	5	2

SOLOMON ISLANDS:

Operator	Operator Name	Aircraft Monitoring Group (e.g. [A342, A343])	MMR Category (1, 2 or 3)	Total # Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Aircraft Remaining To Be Monitored By 30/11/12
SOL	SOLOMON AIRLINES	A320	1	1	1	1
GRAND TOTALS:				1	1	1

AAMA GRAND TOTAL <i>(Australia + Indonesia + Solomon Islands + Papua New Guinea)</i>				Total # Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Aircraft Remaining To Be Monitored By 30/11/12
				816	243	174