



THIRD MEETING OF ADS-B STUDY AND IMPLEMENTATION TASK FORCE (ADS-B TF/3)

Bangkok, 23-25 March 2005

Agenda Item 6: Progress development of regional implementation plan

REVIEW OF FASID TABLE CNS 4-SURVEILLANCE SYSTEMS

(Presented by the Secretariat)

SUMMARY

This paper presents Table CNS-4 for surveillance systems contained in the Part IV of CNS FASID for review by the meeting.

1. INTRODUCTION

1.1 This ASIA/PAC Basic Air Navigation Plan (ANP) and the ASIA/PAC Facilities and Services Implementation Document (FASID) were approved by the President on behalf of ICAO Council on 11 August 2001. The documents are published in the ICAO website. The requirements for the surveillance system are specified in the ASIA/PAC FASID Part IV CNS, Table CNS-4.

2. DISCUSSION

2.1 The ASIA/PAC FASID serves as a planning tool to facilitate transition to the CNS/ATM systems in an evolutionary manner. The FASID is, therefore, expected to be updated regularly to facilitate planning and implementation of the air navigation services and facilities in the region.

2.2 According to the TOR of the Task Force, one of the important tasks assigned by APANPIRG is to develop initial implementation plan for ADS-B. The requirement for implementation of ADS-B should be eventually reflected in the Table CNS-4 – Surveillance System.

2.3 The Table CNS 4 is provided in Attachment 1 to this paper for review by this meeting.

2.4 Changes to the format of the FASID Tables and contents need to be done by processing amendment proposal to the FASID.

3. ACTION BY THE MEETING

3.1 The meeting is expected to:

a) review and update the Attachment and identify how operational requirements for ADS-B should be reflected; and

b) update entries, as required.

TABLE CNS-4 – SURVEILLANCE SYSTEMS

Explanation of the Table

Column

- 1 Name of country and location of the facility of FIR.
- 2 Air Traffic Services Unit served by the facility or FIR.
- 3 PSR – Primary Surveillance Radar.
- 4 Coverage of Primary Surveillance Radar in nautical miles.
- 5 SSR – Secondary Surveillance Radar and Modes implemented will be indicated within Brackets, namely Mode A, C & S.
- 6 Coverage of Secondary Surveillance Radar in nautical miles.
- 7 ADS-B Automatic Dependent Surveillance Broadcast.
- 8 ADS-C Automatic Dependent Surveillance Contract.
- 9 SMR – Surface Movement Radar.
- 10 PAR – Precision Approach Radar.
- 11 Remarks.

Note:

I – Required and implemented. For column 5.
I stands for implementation using conventional SSR while MI stands for implementation using Monopulse SSR.
X – Required but not implemented status not determined
N – Required but not implemented
A – Existing facility provided to supplement or substitute the requirement
F – Future Plan
< - Year planned commissioning year to be used as appropriate in conjunction with 'F' & 'N'
> - Year planned decommissioning year to be used as appropriate in conjunction with 'A' & 'I'

TABLE CNS-4 – SURVEILLANCE SYSTEMS

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Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
AUSTRALIA										
Hans Tableland	Cairns ACC Cairns APP Cairns TWR			I(A/C)	250					
Redden Creek	CairnsACC Cairns APP Cairns TWR	I	50	I(A/C)	250					
Tabletop	Brisbane ACC			I(A/C)	250					
Swampy Ridge	Brisbane ACC			I(A/C)	250					
Mount Alma	Brisbane ACC			I(A/C)	250					
Mount Hardgrave	Brisbane ACC Coolangatta APP Coolangatta TWR			I(A/C)	250					
Brisbane airport	Brisbane APP Brisbane TWR	I	50	I(A/C)	250					
Mount Sommersville	Coolangatta APP Coolangatta TWR	I	50	I(A/C)	250					
Round Mountain	Brisbane ACC Sydney APP			I(A/C)	250					
Mount Boyce	Melbourne ACC Sydney APP Brisbane ACC Melbourne ACC			I(A/C)	250					
Sydney airport	Sydney APP Sydney TWR	I	50	I(A/C)	250			I		
Mount Majura	Canberra APP (in Melbourne) Canberra TWR	I	50	I(A/C)	250					
Mount Bobbara	Melbourne ACC (in Melbourne) Canberra APP Canberra TWR			I(A/C)	250					
Mount Macedon	Melbourne ACC Melbourne APP Melbourne TWR			I(A/C)	250					
Gellibrand Hill	Melbourne ACC Melbourne APP Melbourne TWR	I	50	I(A/C)	250					
Summertown	Adelaide ACC Adelaide APP Adelaide TWR Melbourne ACC			I(A/C)	250					

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
Adelaide airport	Adelaide ACC	I	50	I(A/C)	250					
	Adelaide APP									
	Adelaide TWR									
Kalamunda	Perth ACC			I(A/C)	250					
	Perth APP									
	Perth TWR									
Perth airport	Perth ACC	I	50	I(A/C)	250					
	Perth APP									
	Perth TWR									
Darwin (military ATC facility)	Brisbane ACC			I(A/C)	160					SSR data only
Tindal (military ATC facility)	Brisbane ACC			I(A/C)	250					SSR data only
Oakey (military ATC facility)	Brisbane ACC			I(A/C)	250					SSR data only
East sale (military ATC facility)	Melbourne ACC			I(A/C)	250					SSR data only
Darwin	Brisbane ACC			F(A/C)	250					
				<1998						
BANGLADESH										
Dhaka	Dhaka APP			I(A/C)	200					
BHUTAN										
BRUNEI DARUS- SALAM										
Brunei airport	Brunei APP	I	120	I(A/C)	150					
Berakas	Brunei APP	I	80	F(A/C)	256					Mode S when required
				<1997						
CAMBODIA										
CHINA										

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
Beijing-1	Beijing TWR			MI(A/C)	200					Mode S when required
	Beijing APP									
	Beijing ACC									
Beijing-2	Beijing TWR	I	60	MI(A/C)	200					
	Beijing APP									
	Beijing ACC									
Beijing-3	Beijing TWR	I	200	MI(A/C)	250					
	Beijing APP									
	Beijing ACC									
Tianjin	Tianjin TWR			MI(A/C)	200					
Taiyuan	Taiyuan TWR	I	60	MI(A/C)	200					
	Taiyuan ACC									
Hohhot	Hohhot TWR			MI(A/C)	200					
	Hohhot ACC									
Guangzhou-1	Guangzhou TWR	I	60	MI(A/C)	200					
	Guangzhou APP									
	Guangzhou ACC									
Guangzhou-2	Guangzhou TWR	I	60	MI(A/C)	200					
	Guangzhou APP									
	Guangzhou ACC									
Shenzhen	Shenzhen TWR	I	60	MI(A/C)	200					
	Guangzhou APP									
	Guangzhou ACC									
Zhuhai	Zhuhai TWR	I	60	MI(A/C)	200					
	Zhuhai APP									
	Zhuhai ACC									
Sanya	Sanya TWR	I	150	MI(A/C)	250					
	Sanya APP									
	Sanya ACC									
Haikou	Haikou TWR	I	60	MI(A/C)	200					
	Haikou ACC									
Changsha	Changsha TWR	I	60	MI(A/C)	200					
	Changsha ACC									
Enshi	Enshi TWR			MI(A/C)	200					
	Wuhan ACC									
Wuhan	Wuhan TWR	I	60	MI(A/C)	200					
	Wuhan ACC									
Zhengzhou-1	Zhengzhou TWR	I	60	I(A/C)	200					
	Zhengzhou ACC									
Zhengzhou-2	Zhengzhou TWR	I	60	MI(A/C)	200					
	Zhengzhou ACC									
Guilin -1	Guilin TWR			I(A/C)	200					
	Guilin ACC									
Guilin - 2	Guilin TWR	I	60	MI(A/C)	200					

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
Nanning	Guilin ACC Nanning TWR Nanning ACC			MI(A/C)	200					
Zhanjiang	Zhanjiang TWR Zhanjiang ACC			F(A/C)<2001	200					
Shantou	Shantou TWR Shantou ACC	I	60	MI(A/C)	200					
Kunming	Kunming TWR Kunming ACC	I	60	I(A/C)	200					
Chengdu	Chengdu TWR Chengdu ACC	I	60	I(A/C)	200					
Guiyang - 1	Guiyang TWR Guiyang ACC			I(A/C)	200					
Guiyang - 2	Guiyang TWR Guiyang ACC	I	60	MI(A/C)	200					
Chongqing	Chongqing TWR Chongqing ACC	I	60	MI(A/C)	200					
Shanghai-1	Shanghai TWR Shanghai APP	I	60	MI(A/C)	200					
Shanghai-2	Shanghai ACC Shanghai TWR Shanghai APP Shanghai ACC	I	60	I(A/C)	200					
Jinan	Jinan TWR Jinan ACC			MI(A/C)	200					
Qingdao	Qingdao TWR Qingdao ACC			MI(A/C)	200					
Hefei	Hefei TWR Hefei ACC	I	60	MI(A/C)	200					
Nanjing	Nanjing TWR Nanjing ACC	I	60	MI(A/C)	200					
Lianyungang	Lianyungang TWR Lianyungang ACC			MI(A/C)	200					
Nanchang	Nanchang TWR Nanchang ACC	I	60	I(A/C)	200					
Fuzhou	Fuzhou TWR Fuzhou ACC	I	60	MI(A/C)	200					
Xiamen	Xiamen TWR Xiamen ACC	I	60	MI(A/C)	200					
Shenyang	Shenyang TWR Shenyang ACC	I	60	MI(A/C)	200					
Dalian	Dalian TWR Dalian ACC	I	60	I(A/C)	200					
Harbin	Harbin TWR Harbin ACC	I	60	MI(A/C)	200					

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
Xi'an	Xi'an TWR	F<2000	60	I(A/C)	200					
	Xi'an ACC									
Lanzhou	Lanzhou TWR			MI(A/C)	200					
	Lanzhou ACC									
Urumqi	Urumqi TWR	I	60	MI(A/C)	200					
	Urumqi ACC									
HONG KONG, CHINA										
Beacon Hill	Hong Kong ACC	I	60	I(A/C)	250					
	Hong Kong APP									
	Hong Kong TWR									
Mount Parker	Hong Kong ACC	I	200	I(A/C)	250					
	Hong Kong APP									
	Hong Kong TWR									
Tai Mo Shan	Hong Kong ACC	I	140	I(A/C)	250					
	Hong Kong APP									
	Hong Kong TWR									
Sha Chau	Hong Kong APP	I	80	I (A/C)	250					
	Hong Kong TWR									
Hong Kong Int'l Airport	Hong Kong APP					F<2007	F<2003		F<2000	
	Hong Kong ACC							I		
	Hong Kong TWR									
MACAU, CHINA										
Macau	Macau TWR	I	60	I(A/C)	250					
COOK ISLAND										
DPR KOREA										
	Pyongyang ACC		60	I(A/C)	200					
	Pyongyang APP		60							
FEDERATED STATES OF MICRONESIA										
FIJI										

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
FRENCH POLY-NESIA							1999			
INDIA										
Ahmadabad		I	60	I	256					
Trivandrum		I	60	I	256					
Hyderabad		I	60	I	256					
Guwahati		I	60	I	256					
Calcutta		I	60	I	256		I			
Chennai		I	60	I	256		I			
Delhi		I	60/220	I	256			I		TAR=60NM
Mumbai		I	60/220	I	256			F		RSR=220NM
Mangalore				F<2001	256					"
Berhampur				F<2001	256					
Varanasi				F<2001	256					
Nagpur				F<2001	256					
INDONESIA										
Banda Aceh	Medan ACC			I(A/C)	240					
	Jakarta ACC			F<2000						
Medan	Medan ACC	I	90	I(A/C)	240					
	Medan APP									
	Jakarta ACC			F<2000						
Natuna	Jakarta ACC			MI(A/C)	250					
Tanjung Pinang	Tanjung Pinang APP	I	90	I(A/C)	240					
	Jakarta ACC			F<2000						
Pontianak	Jakarta ACC	I	90	I(A/C)	250					
	Pontianak APP									
Pekanbaru	Medan ACC	I	90	I(A/C)	240					
	Pekanbaru APP									
	Jakarta ACC			F<2000						
Palembang	Jakarta ACC	I	90	I(A/C)	240					
	Palembang APP									
	Jakarta APP									
	SoekamoHatta TWR									
Jakarta/Cengkareng	Jakarta ACC	I	90	I(A/C)	240		I			Monopulse
	Jakarta APP									SSR F<2000
	SoekamoHatta TWR									
Jakarta/Halim	Jakarta ACC	I	90	I(A/C)	240					
	Jakarta APP									
	Halim TWR									

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
Semarang	Jakarta ACC			I(A/C)	240					
Banjarmasin	Ujung Pandang ACC Banjarmasin APP	I	90	I(A/C) F<2000	240					
Balikpapan	Jakarta ACC Ujung Pandang ACC Balikpapan APP	I	90	I(A/C)	240					
Yogyakarta	Yogyakarta APP Jakarta ACC	I	90	I(A/C) F<2000	240					
Surabaya	Bali ACC Surabaya APP Jakarta ACC	I	90	I(A/C) F<2000	240					
Bali	Bali ACC Bali APP	I	90	I(A/C)	240					
Waingapu	Bali ACC			I(A/C)	240					
Ujung Pandang	Ujung Pandang ACC Ujung Pandang APP	I	90	I(A/C)	240					
Manado	Ujung Pandang ACC	I	90	I(A/C)	240					
Kendari	Ujung Pandang ACC			I(A/C)	240					
JAPAN										
Narita airport	Narita TWR							I		
Haneda airport	Haneda TWR							I		
Nagoya airport	Nagoya TWR							I		
Osaka airport	Osaka TWR							I		
Kansai airport	Kansai TWR							I		
Naha airport	Naha TWR							I		
	Naha APP	I	60	I(A/C)	60					
Hakodate airport	Hakodate APP	I	60	I(A/C)	60					
Sendai airport	Sendai APP	I	60	I(A/C)	60					
Narita airport-1	Narita APP	I	60	I(A/C)	60					
Narita airport-2	Narita APP	I	60	I(A/C)	60					
Handeda airport-1	Tokyo APP	I	60	I(A/C)	60					
Handeda airport-2	Tokyo APP	I	60	I(A/C)	60					
Niigata airport	Niigata APP	I	60	I(A/C)	60					
Nagoya airport-1	Nagoya APP	I	60	I(A/C)	60					
Nagoya airport-2	Nagoya APP	I	60	I(A/C)	60					
Osaka airport-1	Osaka APP	I	80	I(A/C)	80					
Osaka airport-2	Osaka APP	I	80	I(A/C)	80					
Kansai airport-1	Kansai APP	I	80	I(A/C)	80					
Kansai airport-2	Kansai APP	I	80	I(A/C)	80					
Hiroshima airport	Hiroshima APP	I	60	I(A/C)	60					
Takamatsu air- port	Takamatsu APP	I	60	I(A/C)	60					
Kouchi airport	Kouchi APP	I	60	I(A/C)	60					
Fukuoka airport-1	Fukuoka APP	I	60	I(A/C)	60					

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
Fukuoka airport-2	Fukuoka APP	I	60	I(A/C)	60					
Nagasaki airport	Nagasaki APP	I	60	I(A/C)	60					
Oita airport	Oita APP	I	60	I(A/C)	60					
Kumamoto airport	Kumamoto APP	I	60	I(A/C)	60					
Miyazaki airport	Miyazaki APP	I	60	I(A/C)	60					
Kagoshima airport-1	Kagoshima APP	I	60	I(A/C)	60					
Kagoshima airport-2	Kagoshima APP	I	60	I(A/C)	60					
Naha airport	Naha APP	I	60	I(A/C)	60					
Shimoshima airport	Shimoshima APP	I	60	I(A/C)	60					
Kushiro	Sapporo ACC		200	I(A/C)	200					
Yokotsudake	Sapporo ACC	I	200	MI(A/C)	200					
Hachinohe	Sapporo ACC	I	200	I(A/C)	200					
Jobonzan	Sapporo ACC	I	200	I(A/C)	200					
	Tokyo ACC									
Oginojo	Sapporo ACC	I	200	MI(A/C)	250					
	Tokyo ACC									
Yamada		120	200	I(A/C)	200					
Hakone	Tokyo ACC	I	200	I(A/C)	200					
Mikawa	Tokyo ACC	I	200	I(A/C)	200					
Mikuniyama	Tokyo ACC	I	200	I(A/C)	200					
Hirata	Tokyo ACC	I	200	I(A/C)	200					
	Fukuoka ACC									
Imanoyama	Tokyo ACC	I	200	I(A/C)	200					
	Fukuoka ACC			MI(A/C)	F(250)					
Kaseda	Fukuoka ACC	I	200	I(A/C)	200					
	Naha ACC									
Sangunzan	Fukuoka ACC	I	200	I(A/C)	200					
Amami	Fukuoka ACC	I	200	I(A/C)	200					
	Naha ACC			MI(A/C)	F(250)					
Miyakojima	Naha ACC	I	200	I(A/C)	200					
Yaedake	Naha ACC	I	200	I(A/C)	200					
				MI(A/C)	F(250)					
Iwaki	Tokyo ACC			MI(A/C)	250					
Hachijo	Tokyo ACC			MI(A/C)	250					
Fukue	Fukuoka ACC			MI(A/C)	250					
Nihonkai	TBD			MI(A/C)	F(250)					
KIRIBATI										
LAO PDR										

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
MALAYSIA										
Langkawi airprot	Langkawi APP	I	60	MI(A/C)	200					
	Kuala Lumpur ACC									
Subang airport	Kuala Lumpur ACC	I	60	MI(A/C)	200					
	Kuala Lumpur APP									
Subang airport (transportable radar)	Kuala Lumpur ACC	I	60	I(A/C)	200					
Genting Highlands	Kuala Lumpur ACC			MI(A/C)	200					
Senai Johor	Kuala Lumpur ACC			MI(A/C)	200					
Kota Kinabalu	Kinabalu ACC	I	60	MI(A/C)	200					
	Kinabalu APP									
Kuching	Kuching APP	I	60	MI(A/C)	200					
	Kuching ACC									
Kota Bahru	Kuala Lumpur ACC			F(A/C)	200					
				<2000						
Kuala Lumpur Airport-Sepang	Kuala Lumpur ACC	I	60	MI(A/C)	200					
	Kuala Lumpur TWR									
Sandakan	Sandakan APP	F<2000	60	F(A/C)	200					
	Kinabalu ACC			<2002						
Miri	Miri APP	F<2000	60	F(A/C)	200					
	Kinabalu ACC			<2002						
MALDIVES										
MARSHALL ISLANDS										
MONGOLIA										
MYANMAR										
Yangon	Yangon APP			F(A/C)	250					
	Yangon ACC	I		I						
NAURU										
NEPAL										
Kathmandu	Kathmandu APP	I	60	I (A/C)	200					

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
NEW ZEALAND										
Auckland	Auckland ACC	I	80							
Ruaotewhenua	Auckland ACC			I(A/C)	250					
Teweraiti	Auckland ACC			I(A/C)	250					
Balance	Ohakea ACC			I(A/C)	250					
Hawkins Hill	Christchurch ACC	I	80	I(A/C)	250					
Mt. Robertson	Christchurch ACC			I(A/C)	250					
Christchurch	Christchurch ACC	I	80							
Cass Peak	Christchurch ACC			I(A/C)	250					
PAPUA NEW GUINEA										
Jacksons airport	Jacksons APP	I	60	I(A/C)	200					
	Moresby ACC									
PHILIPPINES										
Manila	Manila APP	I	70	I(A/C)	70					
Tagaytay	Manila ACC	X	250	I(A/C)	250					
Mactan	Mactan APP	I	70	I(A/C)	70					
Subic Bay	Subic APP	I	70	I(A/C)	70					
Laoag	Manila ACC			MI(A/C)	250					
Mt. Majic	Manila ACC			MI(A/C)	250					
REPUBLIC OF KOREA										
Jeju	Jeju TWR	I	60	I(A/C)	200					
	Jeju APP									
Cheongju	Cheongju TWR									
Incheon	Incheon TWR									
	Seoul APP		60	3 (A/C)						
Gimhae	Gimhae TWR							I		
	Gimhae APP	I	60	I(A/C)	200					
Gimpo	Gimpo TWR	†						I		
Daegu	Taegu Daegu ACC	† 8	200	8 † (A/C)	200					
Yangyang	Yangyang TWR									
SINGAPORE										
Singapore	Singapore ACC	I	230	I(A/C)	256		I			
ATC Center	Singapore APP	I	70	I(A/C)	200					
	Singapore TWR							I		
Singapore airport-2	Singapore APP	I	70	I(A/C)	200					
SOLOMON ISLANDS										

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
SRI LANKA										
Bandaranaike airport	Colombo APP	I	80							
Mt. Pidurutthal- agala	Colombo ACC	I	200	I(A/C)	200					
THAILAND										
Bangkok	Bangkok APP	I	80							
	Bangkok ACC									
Bangkok	Bangkok APP			I(A/C)	250					
	Bangkok ACC									
Chiang Mai	Chiang Mai APP	I	60	I(A/C)	250					
	Bangkok ACC									
Ubon	Bangkok ACC			I(A/C)	250					
Surat	Bangkok ACC			I(A/C)	200					
	Hat Yai APP									
	Phuket APP									
Hat Yai	Hat Yai APP	I	60							
Phuket	Phuket APP	I	60							
Bangkok	Bangkok TWR									
Mae Hong Son	Mae Hong Son APP			F(S)<1997	250			F<2000		
Phitsanulok	Phitsanulok APP	F<1998	60							
Hua Hin	Hua Hin APP	F<1998	60							
U Taphao	U Taphao			F(A/C) <1997	200					
TONGA										
UNITED STATES										
Hilo, Hawaii	ACC			I(A/C)	200					
	APP	I	60							
	TWR									
Honolulu, Hawaii	ACC			I(S)						
	APP	I	60							
	TWR									
Kahului, Hawaii	APP	I	60	I(A/C)						
	TWR									
Kokee, Hawaii	ACC	I	200							
Lihue, Hawaii	APP	I	60	I(A/C)						
	TWR									
Mt. Kaala Hawaii	ACC	I	200	I(A/C)						

Country/Location	ATS Units Served	PSR	Coverage of PSR (NM)	SSR(A/C/S)	Coverage of SSR (NM)	ADS-B*	ADS-C	SMR	PAR	Remarks
1	2	3	4	5	6	7	8	9	10	11
Pahoa, Hawaii	ACC			I(A/C)						
Kunianiau, Hawaii	ACC			I(A/C)						
Guam	ACC	I	200	I(A/C)						
Mt.Santa Rosa, Guam	APP	I	60	I(A/C)						
	TWR									
Mt.Santa Rosa, Guam	ACC	I								
Kona, Hawaii	ACC			F(A/C)	200					
Mt. Kaala, Hawaii	ACC	F	250							
Mt.Santa Rosa, Guam	ACC	F<2000	250	F(S)<2000	250					
VANUATU										
VIET NAM										
Hanoi/Noibai	Hanoi ACC	I	200	I(A/C)	200					
	Hanoi ACC	F<2001	80	F<2001 (A/C)	250					
Danang/Sontra	Ho Chi Minh ACC	I	80	I(A/C)	250					
	Danang APP									
Qui Nhon	Ho Chi Minh ACC			I(A/C)	250					
	Hanoi ACC									
Ca Mau	Ho Chi Minh ACC			F<2001 (A/C)	250					
Nghe An/Vinh	Hanoi ACC			F<2001 (A/C)	250					