



*International Civil Aviation Organization*

**Third Meeting of the Southeast Asia Route Review Task Force  
(SEA-RR/TF/3)**

Bangkok, Thailand, 24 – 27 August 2010

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**Agenda Item 4: Review Current Operations across Southeast Asia and Identify Problem Areas**

**SUB-REGIONAL SSR RADAR, VHF AND ADS-B COVERAGE**

(Presented by Thailand)

**SUMMARY**

This paper presents combined regional SSR radar coverage based on State Aeronautical Information Publication (AIP) available on the Internet and discusses combination of VHF and ADS-B coverage.

**1. INTRODUCTION**

1.1 The meeting would recall that, with the establishment of the Southeast Asia Route Review Task Force (SEA-RR/TF) States concerned were requested to undertake a review of ATS routes in the South China Sea and surrounding relevant areas.

1.2 In addition, the meeting is invited to note discussions at the ATM/AIS/SAR/SG/20 meeting in regard to potential use of combined sub-regional or regional charts showing radar and VHF coverage at FL290 in a standard format for the purpose of sub-regional planning.

**2. DISCUSSION**

2.1 The meeting is advised that SSR radar coordinates and theoretical coverage diagram are currently available through States' Aeronautical Information Publication (AIP), namely in section ENR1.6 Radar Services and Procedures.

2.2 This information has been collated to show as best as possible, an overall Google Earth chart at **Attachment 1** to this WP of the South China Sea and surrounding land mass with theoretical coverage of radar surveillance in the area under consideration by the meeting. Some of this information has been derived from State AIP publicly available on the Internet. In addition, a table containing SSR site, coordinates and theoretical coverage in the current Google Earth chart is presented in **Attachment 2**.

2.3 Another important piece of information which would be of benefit to the meeting concerns VHF and potential ADS-B sites including range and coverage of communications.

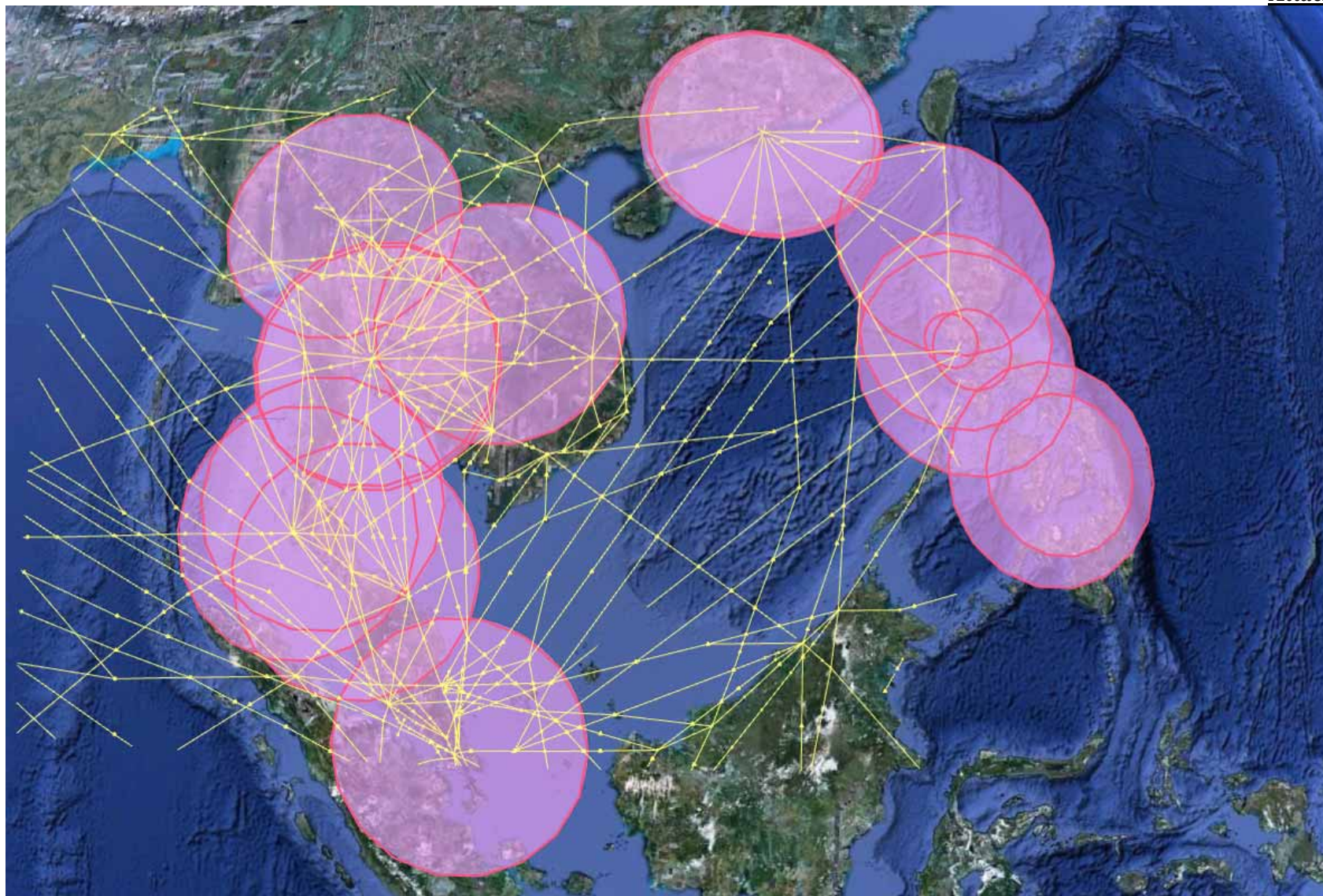
2.4 The meeting should note that information presented in this WP is intended to be used exclusively for regional ATM planning under the auspices of ICAO.

**3. ACTIONS BY THE MEETING**

3.1 The meeting are invited to:

- a) note information presented in this WP;
- b) request States to confirm SSR radar coordinate and theoretical coverage at FL290 in Attachments 1 and 2;
- c) request States whose radar information has not been included, to provide SSR radar coordinate and theoretical coverage at FL290; information becomes available;
- d) discuss potential use of the combined SSR coverage Google Earth diagram for the work of the SEA-RR/TF;
- e) request States who have not already done so, to provide VHF and ADS-B information, so that a similar descriptive Google Earth coverage diagram can also be produced for future work of the SEA-RR/TF.

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**Figure 1:** Combined Google Earth SSR Radar Coverage Chart at FL290 (Theoretical Coverage)

*Table 1: Summary of SSR Radar Coordinate and Coverage included in Google Earth diagram*

State	SSR Site Name	Type	Latitude	Longitude	Theoretical Coverage	Reference / Remark
Hong Kong, China	Mount Parker	RSSR	221611N	1141316E	256 NM	AIP Hong Kong – 3 June 2010
Hong Kong, China	Tai Mo Shan	TSSR	222442N	1140724E	256 NM	AIP Hong Kong – 3 June 2010
Hong Kong, China	Beacon Hill	ASSR	222104N	1140959E	256 NM	AIP Hong Kong – 3 June 2010
Hong Kong, China	Sha Chau	ASSR	222044N	135324E	256 NM	AIP Hong Kong – 3 June 2010
Philippines	Clark		15 10 51.058N	120 33 51.918 E	110 NM	AIP Philippines – 8 May 2008
Philippines	Laoag		18 10 58.0530N	120 32 06.7490 E	250 NM	AIP Philippines – 8 May 2008
Philippines	Mactan		10 18 33.503 N	123 59 05.99 E	180 NM	AIP Philippines – 8 May 2008
Philippines	Manila		14 30 27.9398N	121 01 25.7689 E	90 NM	AIP Philippines – 8 May 2008
Philippines	Mt. Majic		10 19 32.914 N	123 45 33.926 E	250 NM	AIP Philippines – 8 May 2008
Philippines	Subic		14 47 27.494 N	120 16 32.695 E	60 NM	AIP Philippines – 8 May 2008
Philippines	Tagaytay		14 05 23.777 N	120 54 28.917 E	250 NM	AIP Philippines – 8 May 2008
Singapore	ASR I		012159.87N	1035849.89E	250 NM	AIP Singapore – 29 July 2010
Singapore	ASR II		012156.28N	1035844.86E	250 NM	AIP Singapore – 29 July 2010
Thailand	Don Mueang		135518N	1003633E	250 NM	AIP Thailand – 29 July 2010
Thailand	Suvarnabhumi		134149.60N	1004615.20E	250 NM	AIP Thailand – 29 July 2010
Thailand	Chiang Mai		185433N	985808E	250 NM	AIP Thailand – 29 July 2010
Thailand	Surat Thani		090751N	990839E	200 NM	AIP Thailand – 29 July 2010
Thailand	Ubon		151420N	1045202E	250 NM	AIP Thailand – 29 July 2010
Thailand	Phu Keaw		170808.0N	1035937.5E	150 NM	AIP Thailand – 29 July 2010 (WGS84)
Thailand	Doi Intanon		183521.2N	082921.0E	150 NM	AIP Thailand – 29 July 2010 (WGS84)
Thailand	Song Khla		065031.5N	1002524.0E	157.5° – 225.0°: 70 NM 225.5° – 157.0°: 200 NM	AIP Thailand – 29 July 2010 (WGS84) (To be replaced by Hat Yai site by December 2010)
Thailand	Phuket		075244.7N	0981909.3E	220 NM	AIP Thailand – 29 July 2010 (WGS84)
Thailand	Hat Yai		065610N	1002340E	250 NM	AEROTHAI (Operational by October 2010)

**Note:** Information available exclusively for regional ATM planning under auspices of ICAO