



*International Civil Aviation Organization*

**The Eleventh Meeting of the FANS Implementation Team for South-East Asia (FIT-SEA/11) and the Eighteenth Meeting of the South-East Asia ATM Coordination Group (SEACG/18)**

Bangkok, Thailand, 3 – 6 May 2011

**Agenda Item 5: Review Current Operations across Southeast Asia and Identify Problem Areas**

**RADAR COVERAGE CHART OF THE SOUTH CHINA SEA AREA AND THE STATUS MATRIX OF APPLICATION OF RADAR HANDOVER PROCEDURES**

(Presented by the Secretariat)

**SUMMARY**

The *Procedures for Air Navigation Services - Air Traffic Management* (PANS-ATM, Doc 4444) provides that the transfer of control should be effected, whenever practicable, so as to enable the uninterrupted provision of the ATS surveillance service. In light of this, SEACG/10 (March 2002, Bangkok) developed a radar coverage chart for the South China Sea area, which was subsequently reviewed by SEACG meetings including the most recent SEACG/17 (May 2011, Bangkok).

**1. INTRODUCTION**

1.1 The *Procedures for Air Navigation Services - Air Traffic Management* (PANS-ATM, Doc 4444) provides that the transfer of control should be effected, whenever practicable, so as to enable the uninterrupted provision of the ATS surveillance service (paragraph 8.7.4.1). The procedure enables air traffic controllers to provide continuous service for aircraft and to apply seamless reduced longitudinal separation when agreed on through the Letters of Agreement (LOA) between the ATC units concerned.

**2. DISCUSSION**

2.1 At SEACG/14 (May 2007, Hanoi), Thailand suggested that the existing radar facilities and coverage should be utilized to allow for the radar spacing from the Bangkok flight information region (FIR) to the Taipei FIR through the Ho Chi Minh, Sanya, Hong Kong FIRs and vice versa along ATS routes A1/G581/ M750/P901. This spacing had already been applied between some of the FIRs concerned but limitations were still seen due to non-uniformity between all FIRs.

2.2 In light of the above, SEACG/14 reviewed the status matrix of Application of Radar Handover in the Southeast Asia developed by SEACG/13 and updated the table. SEACG/14 was of view that there was a feasibility to implement radar spacing along some ATS routes, and encouraged States to carry out the bilateral coordination to apply the radar spacing and report to SEACG/15 (May 2008, Bangkok) of the outcomes.

2.3 SEACG/15 reviewed and updated the Radar Coverage Chart. Taking into consideration the updated information of the radar coverage chart, the meeting subsequently reviewed the Status matrix of Application of Radar Handover in Southeast Asia. States updated the table.

2.4 At SEACG/17, Malaysia and Viet Nam updated the radar coverage chart of the South China Sea. The radar coverage chart was updated accordingly as in **Attachment A** to this paper. The meeting noted the Status of the Application of Radar Handover Procedures as in **Attachment B** to this paper.

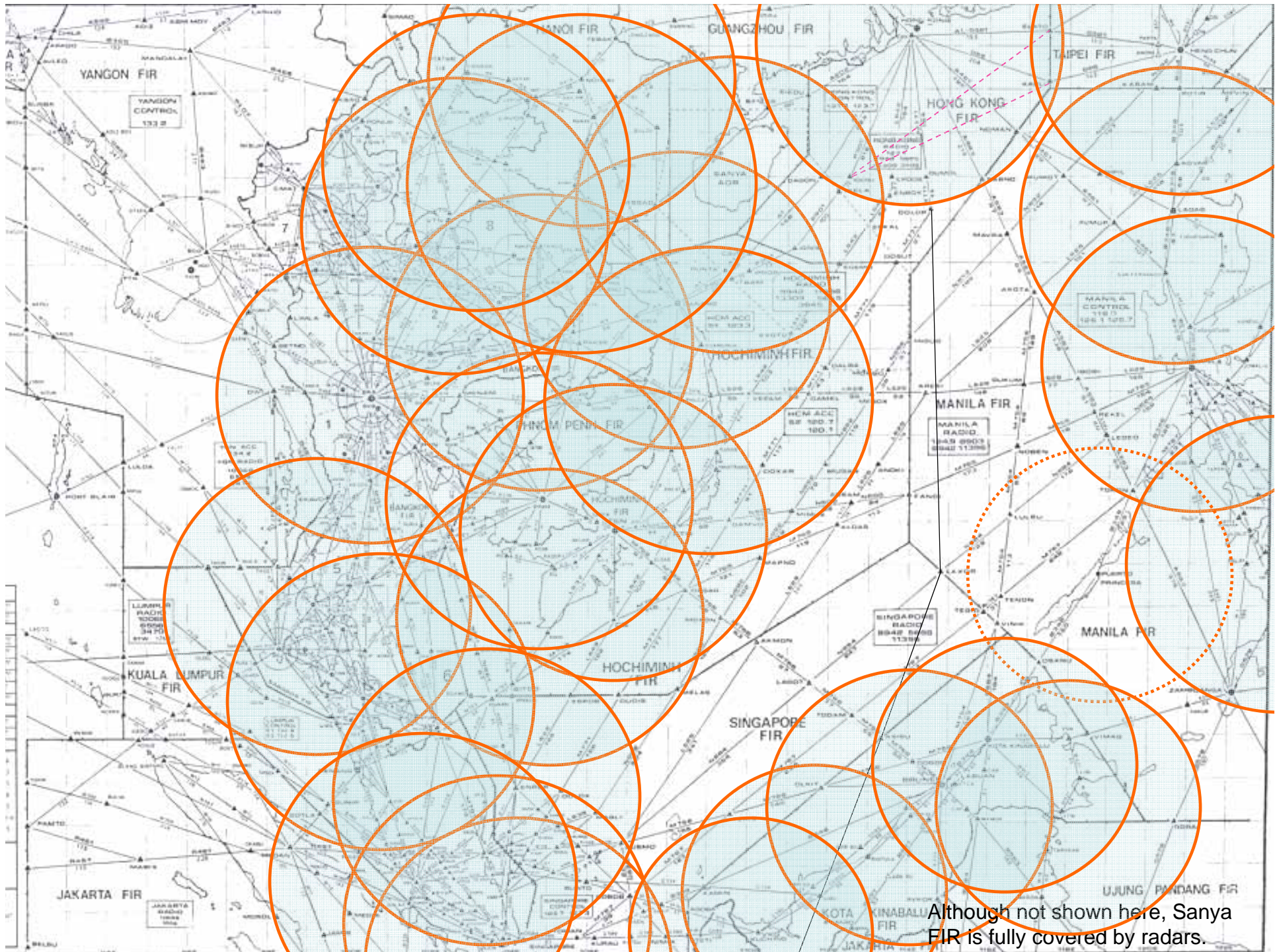
3. **ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note that PANS-ATM states that transfer of control should be effected, whenever practicable, so as to enable the uninterrupted provision of the ATS surveillance service;
- b) review and update the radar coverage chart of the South China Sea in the Attachment A to this paper; and
- c) review and update the Status matrix of the Application of Radar Handover Procedures in Attachment B to this paper.

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Although not shown here, Sanya FIR is fully covered by radars.



Status of Application of Radar Handover in Southeast Asia

Yes: Implemented  
 No: Not Implemented  
 N/A: Not Applicable (radar coverages not overlap, thus impossible)

FIR	Bangkok	Guangzhou	Hanoi	Ho Chi Minh	Hong Kong	Jakarta	Kota Kinabalu	Kuala Lumpur	Manila	Fukuoka	Phnom Penh	Sanya	Singapore	Taipei	Ujung Pandang	Vientiane
Bangkok		N/A	N/A	N/A	N/A	N/A	N/A	YES	N/A	N/A	YES	N/A	N/A	N/A	N/A	YES
Guangzhou	N/A		YES	N/A	NO	N/A	N/A	N/A	N/A	N/A	N/A	TBD	N/A	N/A	N/A	N/A
Hanoi	N/A	YES		YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	YES	N/A	N/A	N/A	YES
Ho Chi Minh	N/A	N/A	YES		N/A	N/A	N/A	N/A	N/A	N/A	YES	YES	N/A	N/A	N/A	YES
Hong Kong	N/A	NO	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	NO	N/A	YES	N/A	N/A
Jakarta	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	NO	N/A	N/A	N/A
Kota Kinabalu	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Kuala Lumpur	YES	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	YES	N/A	N/A	N/A
Manila	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	YES	N/A	N/A
Fukuoka	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	YES	N/A	N/A
Phnom Penh	YES	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	YES
Sanya	N/A	NO	YES	YES	NO	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A
Singapore	N/A	N/A	N/A	N/A	N/A	NO	N/A	YES	N/A	N/A	N/A	N/A		N/A	N/A	N/A
Taipei	N/A	N/A	N/A	N/A	YES	N/A	N/A	N/A	YES	YES	N/A	N/A	N/A		N/A	N/A
Ujung Pandang	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A
Vientiane	YES	N/A	YES	YES	N/A	N/A	N/A	N/A	N/A	N/A	YES	N/A	N/A	N/A	N/A	