



International Civil Aviation Organization

**Second Meeting of the Southeast Asia Route Review Task Force
(SEA-RR/TF/2)**

Bangkok, Thailand, 22 – 26 March 2010

Agenda Item 4: Review Current Operations across South-East Asia and Identify Problem Areas

UNIDIRECTIONAL CROSSING ROUTES

(Presented by the Secretariat)

SUMMARY

The purpose of this working paper is to study a proposal to identify crossing routes which restrict the number of available routes on the major NE/SW traffic flow and implement unidirectional same level pairs of routes on tracks crossing the major traffic flow through the South China Sea which should allow more levels to be available on the major traffic flow.

1. INTRODUCTION

1.1 Over the past years, air traffic has continued to grow in the South China Sea area, necessitating ongoing solutions to manage this growth. A new parallel route structure was planned and implemented in the second half of the 1990's, which appeared to satisfy growth for a short time. Then in the early years of the new millennium, RVSM was introduced which once again gave more levels to the growth of traffic in this area. At the same time, the concept of low cost carriers arrived which once again required additional planning on ways to adequately manage the ever increasing traffic workload.

1.2 Within this period of 15 years, there have been times where traffic decreased due to specific events. Firstly the SARS epidemic saw a dramatic decrease in air traffic, not only in this particular area but also around the world. Fortunately this issue stabilized and finally went away, but was replaced by the swine flu epidemic which once again caused problems to the airlines concerned. After a relatively short period of time, things returned to relative normality until the latest and most dramatic event occurred, namely the Global Recession. Fortunately, the economy is now slowly returning to normal and with the resilience of the aviation industry, traffic growth, although a little slower than before, is returning.

1.3 During all of this time, the South China Sea (SCS) in particular had been operating on an RNAV 80NM or time-based separation standard of 10 minutes. With the advent of ADS-C/CPDLC procedures, there is now two unidirectional routes with caters for FANS equipped aircraft which allow 50NM spacing between FANS equipped aircraft.

2. DISCUSSION

2.1 The meeting would recall that there are several ATS routes which cross the main traffic flow serving major airports in the northeast/southwest portions of the SCS. These crossing aircraft need to be accommodated with sufficient levels. These crossing routes are presently

bidirectional and are mostly of a shorter distance than the major traffic flows. The attached charts (**Attachment 1,2,3**) show examples where, by duplicating these crossing routes and spacing each pair a minimum of 50 NM apart, fewer levels would be required and as a consequence, additional levels could be used by the major traffic flows.

2.2 The suggested pairs of crossing routes which could be designed in this fashion are as follows:

- a) M768 Brunei to TSN
- b) N628 Manila to PCA
- c) A461 Manila to Hong Kong
- d) B462/ B348 Manila to Taipei

2.3 These routes are considered as the most used routes crossing the major traffic flow in the South China Sea area.

2.4 Other crossing routes which may also be considered for unidirectional pairs are:

- a) M772 Jakarta to Hong Kong
- b) A583 Australia (Via Zamboanga) to Hong Kong

2.5 Statistical data is required on these routes with regards to time of use vis a vis the major traffic flow and amount and type of traffic using these routes before consideration is given to this procedure.

2.6 Other issues which need to be taken into account when deciding on these new initiatives include:

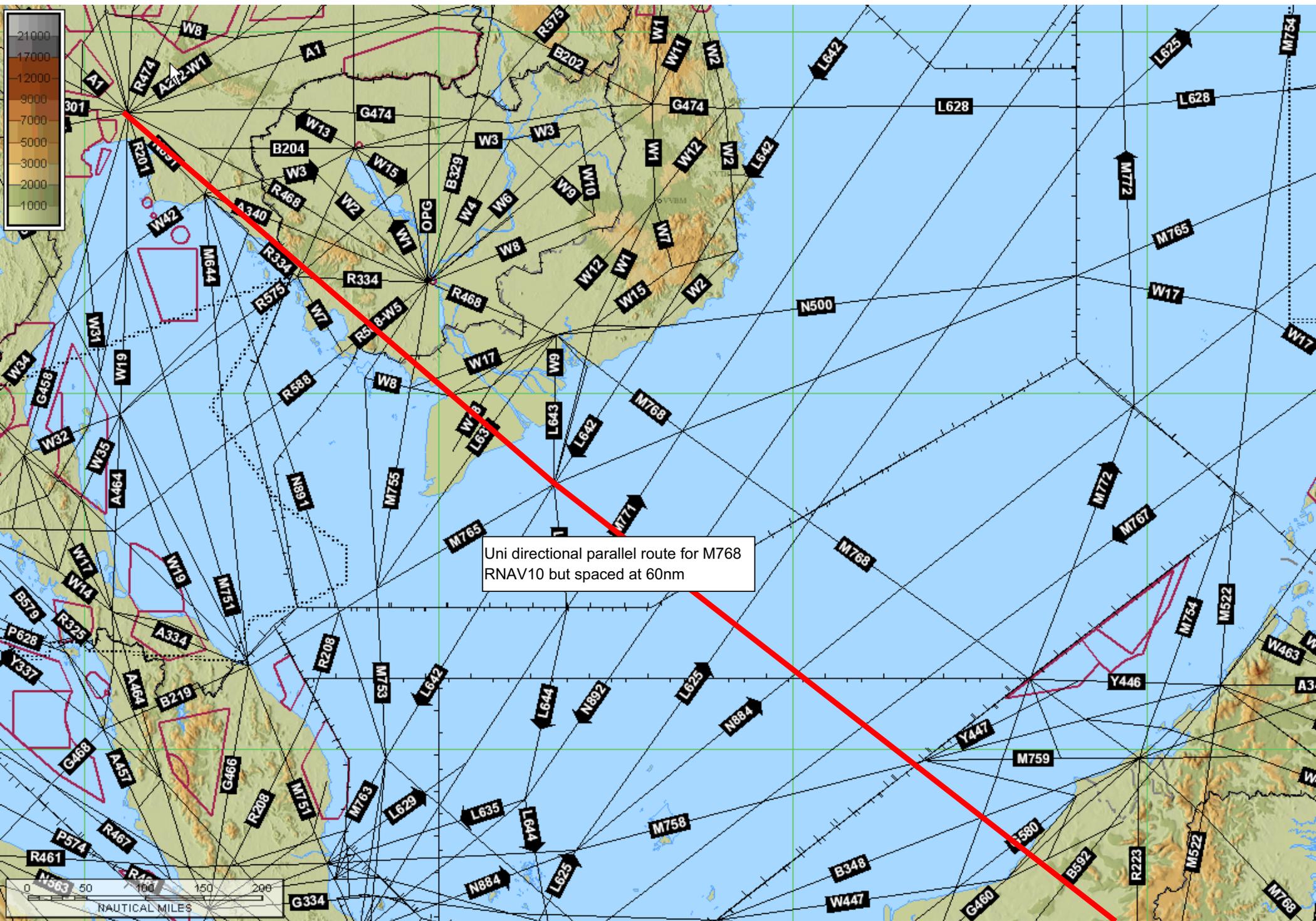
- a) Safety management assessments;
- b) Realistic benefits to both crossing traffic and the major flow traffic; and,
- c) Workload on ACCs

3. ACTION BY THE MEETING

3.1 In discussing this working paper, the meeting is invited to:

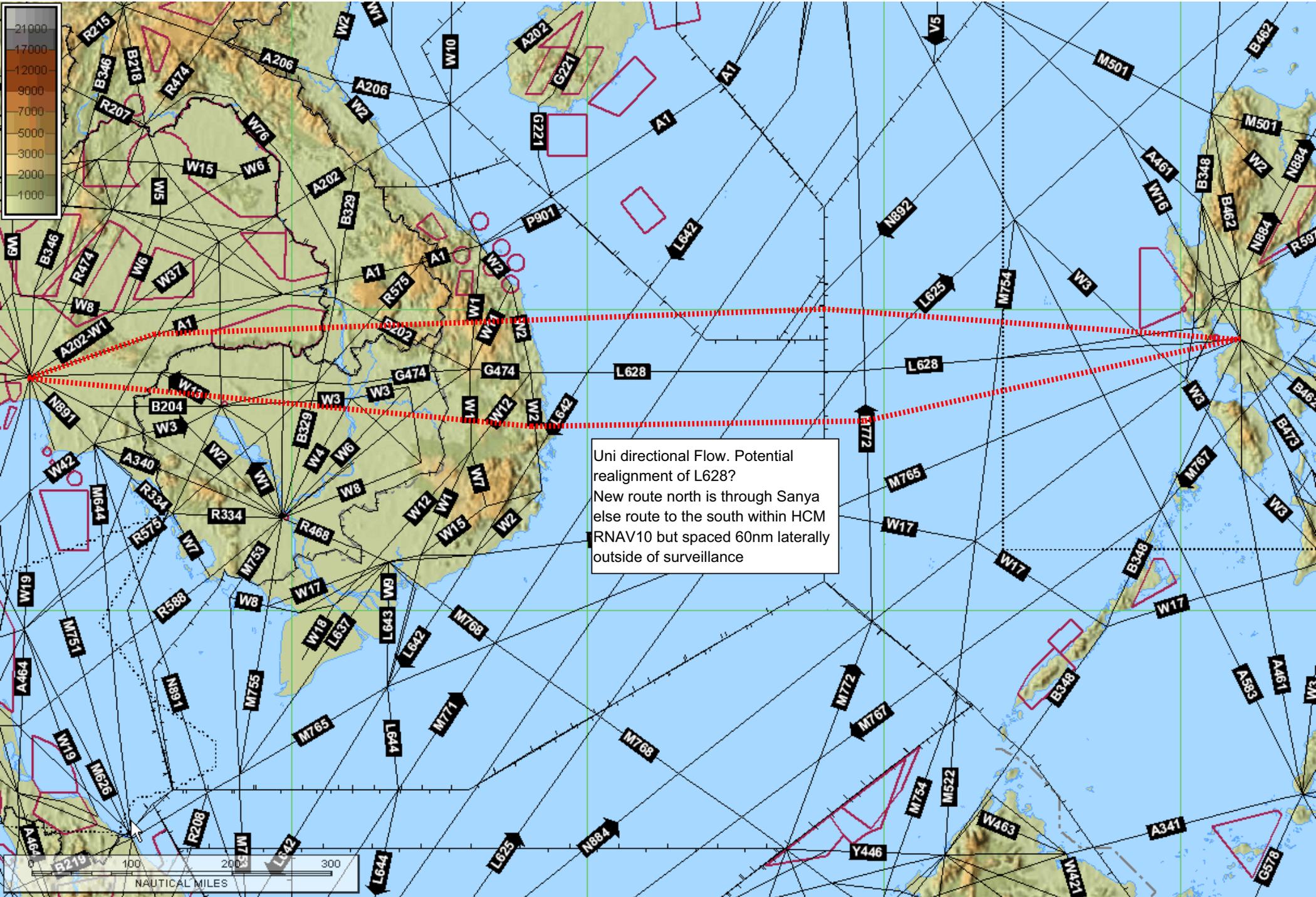
- a) Consider the establishment a small working group;
- b) Study each proposal separately to see if there are benefits to both the users and ACCs concerned;
- c) Assess difficulties and consider ways to overcome issues;
- d) Discuss Safety Management requirements on each subject pairs of routes; and,
- e) Propose a programme for implementation of procedures for the new crossing routes, either singularly or multilaterally covering all changes.

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Uni directional parallel route for M768
RNAV10 but spaced at 60nm





Uni directional Flow. Potential
realignment of L628?
New route north is through Sanya
else route to the south within HCM
RNAV10 but spaced 60nm laterally
outside of surveillance

