REPORT OF SURVEILLANCE WORKING GROUP FOR SEACG

Background

1 At the SEACG/19, the Surveillance Working Group (SWG) was established to look into the surveillance capabilities of each State. The objectives were to determine:

a) What are the horizontal separation standards used within South East Asia airspace, especially at the transfer of control point;
b) The status of ANSPs' surveillance capability within South East Asia airspace;
c) Gaps in Radar, MLAT and ADS-B coverage;
d) Planned ATS surveillance installations;
e) Barriers to implementation (financial, political, technical, etc);
f) Recommendations to harmonise surveillance based separations; and
g) Recommendations to assist the regional application of ATS surveillance facilities.

Problems Identified

2 The SWG discussed various issues during the inaugural meeting including new installations, confirmation of radar coverage in the respective FIRs and separation minima currently employed in both the en-route and terminal airspace of the FIRs (Please see attached). Some of the problem areas identified is as follows:

a) Lack of direct speech circuit between the surveillance controllers to allow coordination for surveillance separation to be applied even with overlapping surveillance coverage;
b) Lack of surveillance handoff procedures between adjacent ANSPs with overlapping surveillance coverage;
c) Infrastructure is absent in areas with surveillance gaps;
d) Interface issues on different systems used by adjacent ANSPs thus leading to higher costs;
e) Application of larger surveillance separation (eg. 15NM or more) within the FIR due to reliability of systems

3 The SWG agreed that States would be provided with the appropriate charts and the table showing the routes (and FIRs' involved), the current

separation and proposed future separation, and a table showing the initiatives and the reasons for the provision of procedural separation where surveillance coverage currently exists.

4 The following charts have been developed using State's Aeronautical Information Publication (AIP) and also inputs provided by some States on their future developments. The charts are attached to this document.

a) Coverage Chart with ADS-B (Pink), SSR (Blue – when ADS-B layer overlaps, it looks purple) and VHF (Green)
b) Coverage Chart with ADS-B and SSR
c) Coverage Chart with ADS-B only
d) Coverage Chart with SSR only
e) Coverage Chart with VHF only

Recommendations

5 The SWG agreed to the following recommendations:

a) States with overlapping surveillance coverage should implement direct speech circuit to allow coordination between the surveillance controllers instead of relaying the information.
b) States with overlapping surveillance coverage should introduce surveillance handoff procedures. This could be done on a phase-by-phase basis, starting with a comfortable longitudinal distance for a period of time before reducing the longitudinal distance further. This will be subjected to the safety assessment of each individual State.
c) ADS-B with VHF Communications should be considered in areas with lack of infrastructure. Sharing of ADS-B data and VHF Communications between adjacent States should also be considered to improve safety and efficiency.
d) Common standards for certain CNS/ATM systems should be developed by ICAO to minimise interface issues on different systems offered by different vendors.
e) Need for States to invest in new technologies to replace current system to allow introduction of harmonised separation.

Summary

6 The South East Asia area faced similar challenges to the Bay of Bengal and Indian Ocean areas. To achieve seamless ATM in our region, we will need to review and harmonise the CNS/ATM implementation in the South China Sea, Bay of Bengal and Indian Ocean areas to maximise the benefits.