

APPENDIX A

STRATEGY FOR THE PROVISION OF PRECISION APPROACH AND LANDING GUIDANCE SYSTEMS

Considering:

- a) in the ASIA/PAC Region, ILS is capable of meeting the majority of requirements for precision approach and landing;
- b) requirements for provision of terrestrial-based navigation facilities, non-precision and precision approach and landing have been implemented in most cases;
- c) the availability of ICAO SARPs and guidance material for GNSS with augmentation to support Cat I precision approach;
- d) the knowledge that GNSS without augmentation can support non-precision approaches and that augmented GNSS- based systems is expected to be available to support Category I operations by year 2006;
- e) GNSS with augmentation to support Category II and III operations is expected to be available in 2010 - 2015 time frame;
- f) MLS Category I is operational and ground and airborne Category III B certification is in progress;
- g) a multi-modal airborne approach and landing capability is necessary and expected to be available;
- h) the definition of required navigation performance for approach, landing and departure operations;
- i) the need to maintain aircraft interoperability both within the region and between the ASIA/PAC region and other ICAO regions and to provide flexibility for future aircraft equipage.

The strategy for ASIA/PAC Region in the provision of precision approach and landing guidance is:

- a) retain ILS as an ICAO Standard system for as long as it is operationally acceptable and economically beneficial;
- b) implement GNSS with augmentation to support Category I operations where operationally required and economically beneficial;

- c) conduct studies for the implementation of GNSS ground-based augmentation systems and GNSS avionics equipment for Category II and III operations;
- d) introduce applicable required navigation performance (RNP) for approach, landing and departure operations in accordance with ICAO provisions;
- e) conduct necessary on-going GNSS and RNP education and training for operational personnel to ensure safe operations;
- f) implement MLS where operational requirements cannot be satisfied by implementation of ILS or GNSS; and
- g) protect radio frequency spectrum of ILS, MLS and GNSS since the transition from ILS to GNSS and /or MLS will be evolutionary and will take some time.

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