

**REVISED NAVIGATION STRATEGY FOR THE ASIA/PACIFIC REGION**

**Considering:**

- a) the material contained in the Performance Based Navigation Manual (Doc 9613) for enroute, approach, landing and departures operations;
- b) operators are approved to conduct PBN operations;
- c) GNSS is the primary navigation system for RNP;
- d) APV operations may be conducted with either BARO-VNAV or augmented GNSS;
- e) Augmented GNSS is available to support Category I, and will be able to support Category II and III operations by 2016;
- f) ILS is capable of meeting the majority of requirements for precision approach and landing in the Asia-Pacific Region;
- g) MLS CAT III is operational;
- h) the need to maintain aircraft and ground interoperability both within the Region and between the Asia/Pacific Region and other ICAO regions and to provide flexibility for future aircraft equipage;
- i) single-frequency GNSS may be susceptible to radio frequency interference and ionospheric disturbances:

**Strategy**

- i) Convert from terrestrial-based instrument flight procedures to PBN operations in accordance with the Asia/Pacific Seamless ATM Plan;
- ii) retain ILS as an ICAO standard system for as long as it is operationally acceptable and economically beneficial;
- iii) implement GNSS with augmentation as required for APV and precision approach or RNP operations where it is operationally and economically beneficial;
- iv) implement the use of APV operation in accordance with the Asia/Pacific Seamless ATM Plan;
- v) rationalize terrestrial navigation aids, retaining a minimum network of terrestrial aids necessary to maintain safety of aircraft operations;
- vi) protect all the Aeronautical Radio Navigation Service (ARNS) frequencies;
- vii) ensure civil-military interoperability; and
- viii) continue monitoring the development of alternative position, navigation and timing

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