

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 equipped to support PBN operations;
- c) GNSS is the navigation sensor for RNP;
- d) APV operations may be conducted with either BARO-VNAV or augmented GNSS;
- e) Augmented GNSS to support Category I operations by end 2012 and Category II and III operations by 2015;
- f) in the Asia/Pacific Region, ILS is capable of meeting the majority of requirements for precision approach and landing;
- g) MLS CAT III is operational; and
- h) the need to maintain aircraft interoperability both within the Region and between the Asia/Pacific Region and other ICAO regions and to provide flexibility for future aircraft equipage.

Strategy

- a) transit to PBN operations as follows :-
 - i) RNP10/RNP4/RNP2 for Oceanic and Remote Continental routes;
 - ii) RNAV5/RNAV2/RNP2/RNP0.3 for Continental En-route;
 - iii) RNAV1, RNAV2 and RNP1 based arrivals and departure;
 - iv) APV **;
 - v) Precision approaches at selected runways.

with respective end states as follows:

- vi) RNP4/RNP2 for Oceanic and Remote Continental routes;
- vii) RNP1/RNP2/RNP0.3 for Continental En-route;
- viii) RNP1 and RNP0.3 based arrivals and departure;
- ix) APV **;
- x) Precision approaches at selected runways.

Note: Ideally, end-state should follow the above process but may be achieved directly without transitting through the immediate phases (i.e. (i) to (v)), if considered safe to do so.

- b) retain ILS as an ICAO standard system for as long as it is operationally acceptable & economically beneficial;
- c) implement GNSS with augmentation as required for APV and precision approach operations where operationally required and economically beneficial;
- d) implement the use of APV operation in accordance with ICAO's requirement;
- e) protect all the Aeronautical Radio Navigation Service (ARNS) frequencies; and
- f) ensure civil-military interoperability.

** APV includes BARO-VNAV, RNP, RNP-AR, APV(SBAS)