MIDANPIRG/7
Appendix 6E to the Report on Agenda Item 6

REVISED STRATEGY FOR THE IMPLEMENTATION OF GNSS NAVIGATION CAPABILITY IN THE MID REGION

Considering that:

1) Safety is the highest priority;

2) Elements of Global Air Navigation Plan for CNS/ATM System on GNSS and requirements for the GNSS implementation will be incorporated into the CNS part of FASID

3) GNSS Standards and Recommended Practices (SARPs), PANS and guidance material for GNSS implementation are available;

4) The availability of avionics including limitations of some receiver designs; the ability of aircraft to achieve RNP requirements and the level of user equipage

5) Development of GNSS systems including satellite constellations and improvement in system performance;

6) Airworthiness and operational approvals allowing the current GNSS to be applied for en-route and non precision approach phases of flight without the need for augmentation services external to the aircraft;

7) Development status of aircraft-based augmentation systems;

8) Regional augmentation systems include both satellite-based and ground-based systems;

9) Human, environmental and economic factors will affect the implementation.

The general strategy for the implementation of GNSS in the MID Region is detailed below. This strategy is based on the regional navigation requirements of:

a) RNP 10 for en-route in remote/oceanic areas;
b) RNP 5 for en-route
c) NPA/APV for approaches and
d) Precision approaches at selected airports.

1) There should be an examination of the extent to which the GNSS system accessible in the Region can meet the navigational requirements of ATM service providers and aircraft operators in the Region;

2) Evolutionary introduction of GNSS Navigation Capability should be consistent with the Global Air Navigation Plan for CNS/ATM systems;

3) Implementation should be in full compliance with ICAO Standards and Recommended Practices and PANS;

4) Introduce the use of GNSS as a primary means of navigation in remote/oceanic areas;

5) Introduce the use of GNSS as a supplemental/primary means of en-route navigation and non-precision approach;

6) Any external augmentation system deemed necessary for the implementation of GNSS for a particular flight phase in an area under consideration (SBAS/GBAS including ground-based regional augmentation system) should be implemented in full compliance with ICAO SARPs;

7) To be extend possible, States should work co-operatively on multinational basis to implement GNSS augmentation system in order to facilitate seamless and inter-operable systems;

8) States consider segregating traffic according to navigation capability and granting preferred routes to aircraft with better navigation performance with the exception to State aircraft;

9) States undertake a coordinated R& D program on GNSS implementation and operation;

10) ICAO and States should undertake education and training to provide necessary knowledge in GNSS theory and operational application, and

11) States establish multidisciplinary GNSS implementation teams, using section 6.10.2 of ICAO Circular 267, Guidelines for the Introduction and Operational Approval of the GNSS, as a guide.
