International Civil Aviation Organization

Fourteenth Meeting of the Asia Pacific Air Navigation Planning Implementation Regional Group (APANPIRG/14)

Bangkok, Thailand, 4 to 8 August 2003

Agenda Item 3: CNS/ATM Implementation and Related Activities

CNS/ATM ACTIVITIES IN NEPAL

(Presented by Nepal)

SUMMARY

This Paper Presents The CNS/ATM System Implementation Activities In Nepal.

1. **Introduction**

1.1   The Civil Aviation Authority of Nepal (CAAN) established in 31st December 1998 is progressing steadily for the development of air transportation in Nepal. It is an autonomous body for regulating all the activities in civil aviation sector as well as providing Air Navigation Services and airport operation and management for overall development in tourism and contributing the poverty alleviation in Nepal.

1.2   Considering the above objectives and ICAO guidelines CNS/ATM Project was formed as early as 1995 and a permanent department is established under CAAN. So far the following activities have been completed :

   a.   Transformation of all coordinates into WGs-84 system and published in AIP Nepal.

   b.   National CNS/ATM Transition plan for 10 year period is prepared and under review now.

   c.   GPS based IFR enroute network as well as non precision approach (NPAs) procedures for six airports have been implemented for trail purpose.

   d.   Inhouse interaction program, presentations, workshops and seminars on different topics of CNS/ATM have been conducted.

   e.   ATS Route G-348 (Kathmandu – Baghdogra – Paro) has been established.

2. **On going Activities**

Communication

- CAAN has formed an ATN Task Force for planning and to upgrade the AFTN network as per Asia Pacific ATN Transition Plan for transition to ATN

- Feasibility Study has been completed and program has been set to establish RCAG station to provide the extended range ACC VHF coverage through out Kathmandu FIR.

- VSAT Network between Katmandu and Nepalgunj has also been planned to be established.

- Establishment of VSAT link with India is being considered as per ASIA/PAC Air Navigation requirements for Kathmandu/Kolkata, Delhi and Varanashi ATS direct speech circuits. After the establishment of VSAT network with India it is anticipated that existing Kathmandu/Mumbai data communication and ATS/DSC with Kolkata, Delhi and Varanashi will be enhanced.

Navigation

GNSS

- Programme is fixed for the Development and Strengthening of GNSS based air Navigation System which covers training in designing GPS based procedures for strengthening and capacity building of CAAN and implementation of GNSS based Air Navigation in Nepal.

- The Designing of GPS based Procedures includes departure procedure of Tribhuwan International Airport, Biratnagar, Janakpur, Bharatpur, Bhairahawa and Nepalgunj, and Approach /Departure. Procedures for Chandragadhi, Simara and Surkhet airports.

- Workshop / interaction for the Air Traffic Controllers / Pilots on. "GPS procedure covering operational, technical and other aspects.

Preparation of operational and pilots requirements and database for the eventual implementation of IFR GPS non-precision approaches.

Airspace Management

- For the smooth flow of traffic within Kathmandu FIR for both domestic and international flights, work has been initiated for the revision of airspace

- Digitization of Approach charts and amendment to the AIP Nepal is underway.

- Civil Aviation Authority of Nepal and Airport Authority of India are coordinating for finalization and signing letter of Agreement (LOA) on ATS routes and coordination procedure.

- The outstanding issues on the proposed routes to be established through Nepal under the EMARSSH Project such as Himalaya-1 (Nepalgunj to Indek), Himalaya-2 (Kunming-Katmandu), Himalaya-3 (Katmandu-Nepalgunj-Delhi), BB17 and BB18 is continued to be pursued toward implementation.

Future Plan

- Upgrade the AFTN network as per Asia Pacific ATN Transition Plan for transition to ATN. The target date for the transition to ATN has been planned for the year 2005.

- For maximum utilization of the Nepalese sky and contribute to enhance the safety of the flights from the east to the west and across the Himalayas, Nepal's air routes will be restructured. The air route proposed in EMARSSH project over flying Nepalese airspace is aimed at providing multiple benefits to the international operators such as short distance, save fuel and time. Consequently lowering operating cost of airlines. The implementation of these routes will be possible only with the cooperation from concerned States (India, China, Myanmar, Bangladesh, Pakistan).

- Development of GPS based NPAs, SIDs, requirements and database and proper legislation to enable eventual implementation of IFR GPS based air navigation in the country.

- The CVOR/DME at Nepalgunj has been identified to be replaced by DVOR/DME. The planning work is in progress and CAAN will make final decision for implementation of this project.

3.   Conclusion

3.1   It is suggested that the meeting take note of the activities held in Nepal in the field of CNS/ATM and recommend the action plan to implement EMARSSH Route.