International Civil Aviation Organization

The First Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/1)

Bangkok, Thailand, 19 – 23 September 2011

Agenda Item 4: Implementation of New CNS/ATM Systems
Update on ATC automations systems and RADAR integration activities

DEVELOPMENTAL ACTIVITIES IN INDIAN FIRS

(Presented by INDIA)

SUMMARY

The civil aviation industry in India has achieved double digit figures growth for past several years. This paper presents information on various projects and activities being carried out to provide robust support to the aviation industry.

1. INTRODUCTION.

1.1 Several ambitious projects have been initiated to improve the capacity, safety and efficiency of the airports and airspace in India. The projects are being carried out not only at Major Airports and bigger ATC centres but also at other airports with smaller ATC centres comprising of Aerodrome Control and Approach.

2. DISCUSSION

2.1 Automation Projects and Infrastructure.

2.1.1 Automation systems at Delhi and Mumbai have been upgraded from Auto Trac II to Auto Trac III. The advanced automation system has already been installed at Chennai and the trials are progressing satisfactorily. These automation systems have advanced features of conflict alerts and electronic flight progress strips.

2.1.2 The phased automation of 38 aerodrome control towers and six Area Control centres is progressing on schedule. The equipment has been installed at almost all the centres and trials are progressing satisfactorily at several of these centres.

2.1.3 ASMGCS is now operational at Delhi, Bangalore, Hyderabad and Mumbai. Trials are progressing well at Chennai and Kolkata.

2.1.4 For improved radar coverage of airspace, wherein the density of crossing, climbing/descending traffic is high, six new long range radars have been installed at Bhopal, Jharsiguda [south of G450, way point KINKI] , Bellary [BBI VOR on B466] , Vizag [VVZ on L301] , Katihar [on R344 & W105] and Udaipur [on R462 & A347]. This will enhance the safety and efficiency of flight operations.

2.1.5 The ILS CAT-II has been installed at Amritsar and Lucknow airports.

2.1.6 AIDC trials are going on between Mumbai and Karachi FICs & Mumbai and Chennai FICs.

2.1.7 The Preliminary System Acceptance Test (PSAT) of **GAGAN** (GPS Aided Geo Augmented Navigation System) has been conducted. The results have demonstrated that required standards of accuracy and message integrity are being met.

2.1.8 India has planned to implement ADS-B at 14 locations in India including Port Blair. The ADS-B has been planned at Port Blair to cater for increasing enroute traffic and consequent demand for optimum flight levels in the BOB area. ADS-B will improve efficiency of air traffic services to about 200 flights operating on L759, P628, N877, P761 and L510. The ADS-B in continental airspace will be employed at low traffic density airports where procedural ATC is in vogue presently. The ADS-B stations will be operational by2012.

2.1.9 India has initiated process to implement Central Air Traffic Flow Management to optimize capacity of airspace vs traffic demand.

2.2 AIRSPACE PLANNING

2.2.1 The Chennai airspace has been restructured and it will have two sectors for Oceanic airspace and a four layer concept for the continental airspace. There will be five Upper area controls, six Lower area controls, six Approach control units. The fourth layer will consist of the Aerodrome traffic zones around the aerodromes. All the radar sensors within Chennai FIR and some outside have been integrated so as to provide for seamless radar coverage within the continental airspace. These changes will cater to the requirements of additional surveillance and communication need for implementation of RHS along all RNP routes in Phase 2.

2.2.2 Additionally to improve air connectivity, two international and ten domestic ATS routes are under active consideration.

2.2.3 Two new routes to provide reduced flying times between Africa and Asia are also being actively considered

2.2.4 RHS of 50 NM was implemented wef 30.06.2011 on ATS routes N571 & P762 as decided by the RHS TF.

2.2.5 The connector routes between ATS routes L516 and L894 and Flex Tracks in Maldives FIR are being promulgated. The routes may be available from 20th October. The LOA between Male and India will be signed at mumbai on 26th September 2011.

2.3 AIR TRAFFIC SERVICES

2.3.1 ADS/CPDLC is already operational on H-24 basis in all the four FIRs.

2.3.2 To enhance air traffic handling capacity three runways have been made operational at Delhi airport. At any one time two runways are put into operation, thus achieving a traffic handling capacity of 60-65 movements per hour.

2.3.3 At Chennai, and Kolkata new facilities are being created.

2.3.4 Two new RETs for RWY09 and RWY14 are being developed at Mumbai. A project to enhance capacity at Mumbai Airport has been launched. IATA is an active participant in the project

2.3.5 The PBN RNAV1 SIDS & STARS have already been implemented at Delhi, Mumbai, Ahmedabad, Chennai, Hyderabad, Kolkata, Bangalore and Trivandrum.

2.3.6 Eight RNAV-5 routes have been designed to be implemented between busy city pairs

2.3.7 At Delhi, Mumbai, Hyderabad, Bangalore, Kolkata and Chennai, network based Clearance Delivery (CLD), DATIS and VOLMET are under implementation.

3 ACTION BY THE MEETING

3.1 The meeting is invited to

a) note the progress made by India and the future plans for upgradation.

b) states are requested to support the initiatives taken by India for seamless ATM in the region.

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