International Civil Aviation Organization

Eight Meeting of the Communications/Navigation/Surveillance and Meteorology Sub-Group (CNS/MET SG/8) of APANPIRG

Bangkok, Thailand, 12-16 July 2004

Agenda Item 4: Aeronautical Mobile Service

VHF COVERAGE OVER INDIAN AIRSPACE

(Presented by India)

SUMMARY

This information paper presents the progress on implementation of RCAG Coverage over Indian Airspace (Terrestrials and Oceanic).

1. INTRODUCTION

1.1 The status on improvement and enhancement of VHF coverage over Indian airspace is presented in this paper.

2. PROGRESS

2.1 RCAG (Remote Controlled Air to Ground Communication)

2.1.1 Enhancement of VHF coverage over Indian airspace in the Oceanic region

To enhance the ACC coverage over Bay of Bengal in Indian Airspace, RCAG VHF Station at Vishakapatanam and Port Blair controlled by both Chennai and Kolkata and RCAG/ VSAT(s) at Bhubaneswar to be controlled by Kolkata have already been established in October/November 2000.

The ACC coverage of Mumbai and Trivandrum airport over Arabian Sea has been enhanced by putting RCAG/VSAT at Agatti (an island in Arabian Sea) controlled from Mumbai and Trivandrum airport.

Details of RCAG Links over Oceanic region

SNO	Name of RCAG Circuit		
	Controlled Station	Controlling Station	**Frequency of operation**
1.	Port Blair	Chennai	126.150 MHz
2.	Vizag	Chennai	126.150 MHz
3.	Vizag	Kolkata	132.450 MHz
4.	Port Blair	Kolkata	132.450 MHz
5.	Bhubaneswar	Kolkata	132.450 MHz
6.	Agatti	Mumbai	125.350 MHz
7.	Agatti	Trivandrum	125.950 MHz

With the above measures taken by India, VHF coverage over Oceanic region has been improved.

To ensure further improvement, AAI has a plan to deploy high power VHF Transmitter with directional antenna at Chennai and Port Blair and High power VHF Transmitters at Kolkata and Vishakapatanam. On implementation of the same complete Indian Airspace over Bay of Bengal is expected to be covered by VHF communication.

2.1.2 Enhancement of VHF coverage over Indian airspace in the Landmass region.

The ACC coverage of Delhi has been enhanced by installing RCAG/VSAT at Khajuraho controlled from Delhi. RCAG at Porbandar controlled from Mumbai airport has been installed to enhance the ACC coverage of Mumbai. Similarly Chennai ACC coverage has been improved by putting RCAG at Bangalore and controlled from Chennai.

SNO	RCAG Station	Controlling STN	Frequency
1.	Khajuraho	Delhi	120.900 MHz
2.	Chennai	Bangalore	118.900 MHz
3.	Porbandar	Mumbai	132.700 MHz

Airports Authority of India has a plan to implement RCAG at the following stations in addition to existing links to provide full VHF coverage over Indian Airspace. These stations are proposed to be operated on OFC/VSAT links.

Details of additionally planned RGAG Links

SNO	Controlled STN	Controlling STN	Frequency in MHz
1.	Amritsar	Delhi	124.550
2.	Jodhpur	Delhi	124.550
3.	Sunder Nagar	Delhi	124.550
4.	Aurangabad	Mumbai	132.700
5.	Goa	Mumbai	125.350
6.	Bellary	Chennai	118.900
7.	Ooty	Chennai	118.900
8.	Jharsuguda	Kolkata	120.100
9.	Katihar	Kolkata	120.100
10.	Shillong	Kolkata	120.100
11.	Bhuj	Ahmedabad	123.750
12.	Udaipur	Ahmedabad	123.750
13.	Shillong	Guwahati	120.500
14.	Bhopal	Nagpur	123.900
15.	Ooty	Trivandrum	125.950

3. ACTION OF THE CONFERENCE

The conference is invited to take note of the information contained in this paper.