



**WORKING PAPER**

**SPECIAL AFRICA-INDIAN OCEAN (AFI)  
REGIONAL AIR NAVIGATION (RAN) MEETING**

**Durban, South Africa, 24 to 29 November 2008**

**Agenda Item 6: Development of a set of comprehensive work programmes in the air navigation field, aimed at improving efficiency of the air navigation system (Efficiency Committee)**

**AIR-GROUND COMMUNICATIONS IN THE AFI REGION**

(Presented by the International Air Transport Association (IATA))

**SUMMARY**

This paper presents the results of communications surveys conducted by IATA and makes a proposal for improvement of air-ground communications in the AFI Region by making use of ionospheric propagation forecasts

Action by the meeting is in paragraph 2.

**1. INTRODUCTION**

1.1 From time to time IATA conducts surveys on air-ground very high frequency (VHF) and high frequency (HF) communications performance, and the quality of air traffic services (ATS) provided in the AFI region. IATA carried out one such survey from 3 to 23 September 2007.

1.2 A working paper on the outcome of the above survey was presented during the 16<sup>th</sup> meeting of the Africa-Indian Ocean Planning and Implementation Regional Group (APIRG/16, Kigali, Rwanda, 19 to 23 November 2007). AFI States requested IATA to evaluate air-ground VHF and HF communications performance, and quality of ATS services in the AFI region every 18 months. The next survey is scheduled to take place in March 2009.

1.3 At the 14th Meeting of the Reduced Vertical Separation Minimum (RVSM) Task Force in May 2008, the International Federation of Air Line Pilots' Associations (IFALPA) expressed concerns about communications deficiencies in Africa with emphasis on Angola and the Democratic Republic of the Congo. To address this matter, the AFI RVSM Task Force and Programme Management Team (PMT) requested IATA to conduct a special communications survey in the Brazzaville, Kinshasa and Luanda Flight Information Regions (FIRs) from 23 June to 11 July 2008. The results of this survey are summarised below.

1.4 **Brazzaville:** VHF communications in Brazzaville FIR had improved significantly since September 2007.

1.5 **Kinshasa:** VHF communications in Kinshasa FIR had degraded significantly since September 2007. The availability of HF communications needed to be improved by operating the Flight Information Centre (FIC) from Ndolo Airport where the appropriate equipment is located.

1.6 **Luanda:** VHF communications in Luanda FIR were still limited to the Luanda Terminal Control Area (TMA) as had also been the case in September 2007. The new satellite-based VHF system needed to be commissioned as soon as possible. The availability of HF air-ground communications needed to be improved by undertaking a thorough analysis of the entire transmission chain.

1.7 Following this survey, corrective measures were taken both in the Kinshasa and Luanda FIRs. Data on communications were collected daily, sent to IATA for analysis and presented to weekly teleconferences of the RVSM PMT. Through this special focus, gradual improvements were shown throughout the period from end of July to end of August 2008.

1.8 An important lesson learned in all three FIRs above was that States and air navigation service providers (ANSPs) using HF communications need to select operational frequencies taking ionospheric propagation conditions into consideration.

**Recommendation 6/x — Improvement of air-ground high frequency (HF) communications in the AFI Region through use of ionospheric propagation forecasts**

That States and air navigation service providers utilising HF air-ground communications develop procedures for selection of operational frequencies taking into account ionospheric propagation forecasts.

**2. ACTION BY THE MEETING**

2.1 The meeting is invited to:

- a) note the contents of this paper;
- b) recommend that States and ANSPs take ionospheric propagation forecasts into consideration when selecting HF operational frequencies; and
- c) adopt the recommendation at paragraph 1.8 above.

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