

## **ELEVENTH AIR NAVIGATION CONFERENCE**

**Montreal, 22 September to 3 October 2003**

### **Agenda Item 2: Safety and security in air traffic management (ATM)**

#### **2.1 Safety management systems and programmes :**

### **ON THE USE OF AIRBORNE COLLISION AVOIDANCE SYSTEM**

(Presented by the Interstate Aviation Committee)

#### **SUMMARY**

This working paper considers top priority measures to be taken for the purpose of the improvement and unification of the order of TCAS (ACAS) use.

Action by the conference is in paragraph 3.

## **1. INTRODUCTION**

1.1 The existing Standards and Recommended Practices of the traffic alert and collision avoidance system (TCAS) use at different stages of flight allow to considerably reduce the risk of aircraft near collision. However, the collision in the German air space on June 1, 2002 of the TU-154 M and Boeing-757 aircraft, which were equipped with these systems, as well as the near collision of aircraft over Japan on January 31, 2001 showed that at present some legal, organizational issues, related to the TCAS operation, remained unsettled.

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<sup>1</sup> English and Russian versions provided by the Interstate Aviation Committee.

## 2. **DISCUSSION**

2.1 In order to improve and unify the order of the TCAS operation it is expedient to revise the existing programmers of primary and periodic training of airmen, related to the flight operation of TCAS, and bring them in compliance with the provisions, stated in the letter of the ICAO Secretary General from August 30, 2002 No. AN-11/19-02/82.

2.2 Airlines with the participation of aircraft developing and manufacturing companies should revise flight operation manuals in relation to executing by the flight crew operational procedures with TCAS for the purpose of their unification. Such work is already being carried out in the Commonwealth of Independent States (CIS) States.

2.3 It is necessary to ensure regular collection of flight crews' reports about issuing resolution advisory (RA), considering every case, when the system gets into action, as an incident, subject to investigation in accordance with the national regulations with the aim of working out appropriate recommendations.

## 3. **SUGGESTED ACTION**

3.1 The conference is invited to consider the issue of setting up a working (special) group of experts to work through a single methodology of the airborne collision avoidance system use, based on the analysis of the TCAS activation cases.

3.2 ICAO is invited to take the following additional perspective actions:

- a) to work out the mechanism of forming air traffic controller's instruction, TCAS directives and flight crew's decision, which will rule out a possibility of giving incompatible commands (specification of the Annexes 2, 10, 11 and the corresponding PANS);
- b) to issue a corresponding document on the flight and traffic control personnel training in relation to their actions in case of TCAS RA;
- c) to submit for consideration of the Flight Recorder Panel the proposal on the obligatory registration by the parametric flight recorder of the information on RA commands in flight for the aircraft, equipped by the TCAS systems; and
- d) to consider the issue on the necessity of developing and introducing automatic systems of receiving by air traffic control (ATC) information about the TCAS RA commands in a digital form.