

ELEVENTH AIR NAVIGATION CONFERENCE

Montreal, 22 September to 3 October 2003

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

**2.5 Safety and security of the ATM infrastructure
:**

SECURITY ASPECTS IN AIR TRAFFIC MANAGEMENT

(Presented by India)

SUMMARY

This paper presents the new security dimensions in air traffic management caused by the recent unprecedented happenings of unlawful interference to civil aviation and supports proposed actions by ICAO as contained in AN-Conf/11-WP/25 presented by the ICAO Secretariat. This paper lists certain new issues involved that need urgent action and recommends development of guidance material to address such issues for international application in civil aviation.

Action by the conference is in paragraph 3.

1. INTRODUCTION

1.1 Air traffic management systems and procedures have been developed by ICAO and States primarily to ensure safe, orderly and efficient flow of air traffic. The training courses of air traffic controllers have been evolved to develop proficiency of controllers to achieve this objective. The focus of air traffic controllers is thus on providing standard separation between aircraft.

1.2 The events of 11 September 2001 have, however, added a new dimension of aviation security in the domain of air traffic management. For timely analysis and response for effective handling of the extreme type of situation of unlawful interference, air traffic controllers would need to be adequately trained and provided with necessary facilities, supported by well-defined guidelines and procedures to meet such operational contingencies in real time. Any delay in reaction or misjudgment leading to improper or wrong

reaction would be equally disastrous. Handling of hijacked aircraft to protect strategic targets against attack from such aircraft may add complexity to the air traffic control task.

1.3 The air traffic control (ATC) procedures evolved over the years do not cater to the type of extreme nature of unlawful interference to civil aviation. Sensitivity of aviation safety and persistent urgency in the security aspects of air traffic management, as dictated by the recent events, would need appropriate amendment of ATC procedures and development of guidance material for the controllers and air crews to cater to the in-flight emergency caused by severe security-related situations.

2. DISCUSSION

2.1 The September 11 events had a devastating impact on the global air transport industry and economy, of a scale that it has not yet been able to recover. While ICAO embarked upon strengthening the security-related Standards and Recommended Practices, several States undertook a review of their security measures in air transport operations and incorporated new measures to prevent and deal with such situations. The main aspects which became the focus of attention were the process or procedures that could help identify an aircraft in flight which could be used as a missile against selected targets, to control such suspect aircraft and to terminate the situation. Since no international guidelines are available to deal with such situations, States have been developing their own specific procedures to protect strategic targets against attack from the hijacked aircraft.

2.2 India, realizing the sensitivity of such developments and potential threats from unlawful interference, has developed a system laying down additional surveillance measures to identify suspect aircraft, procedures to handle suspect aircraft, coordination to be achieved between the ATC and other agencies required to handle such in-flight security-related situations, defined functions and responsibilities of various agencies in different situations and established the chain of command for taking decisions and implementation of the same.

2.3 The nature of a situation may be such that civil ATC can no longer handle and terminate the security-related situation in flight and would require intervention of military units to deal with the situation. Such a contingency would lead to a situation where normal air traffic continues under the control of civil ATC, while the control of suspect aircraft is transferred to military control within the same airspace.

2.4 Under such situations, ensuring safety of normal air traffic under the control of civil ATC, while the suspect aircraft is simultaneously handled in the same airspace under military control, becomes a very critical function for the civil air traffic controllers. The situation needs to be addressed through the establishment of international guidelines.

2.5 AN-Conf/11-WP/25 presented by the ICAO Secretariat, entitled "In-flight emergency response procedures for air traffic controllers", also stresses the need for development of adequate procedures and guidelines so that air traffic controllers confronted with the operational and psychological demands of such contingencies, may be in a position to act appropriately. AN-Conf/11-WP/23 presented by the ICAO Secretariat calls for the creation of defence mechanisms to safeguard civil aviation and for the development of the means necessary to ensure that the air navigation system is ready to cope with the consequences of an act of unlawful interference.

2.6 While supporting ICAO initiatives and proposals in this regard, it is perhaps necessary to consider development of in-flight procedures for air crews in addition to the in-flight emergency response procedures for air traffic controllers, as well as examine development of appropriate technologies in the aircraft and on ground to support appropriate analysis and reaction to the in-flight situation. Keeping this in view, this paper suggests some additional actions to supplement the actions proposed by ICAO in AN-Conf/11-WP/23 and AN-Conf/11-WP/25.

3. ACTION BY THE CONFERENCE

3.1 The conference is invited to take note of the contents of this paper and support ICAO efforts in addressing the new security-related issues in air traffic management.

3.2 The conference is invited to discuss and decide to require ICAO to undertake, or constitute a group of experts, to develop guidance material on the following:

- a) additional surveillance measures to identify suspect aircraft which could potentially be used as missile against selected targets;
- b) procedures to ensure safety of normal air traffic while handling suspect aircraft;
- c) coordination procedures between civil and military to handle security related in-flight emergencies;
- d) additional training requirements for air traffic controllers, particularly on human factors issues, to develop appropriate response to in-flight unlawful interference under various situations; and
- e) modifications to, or requirement of, additional equipments on board aircraft and on ground to facilitate uninterrupted air-ground data exchange and independent real time situation transmission from aircraft to ground, when required.

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