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ASSEMBLY — 36TH SESSION

TECHNICAL COMMISSION

Agenda Item 32: Development of an up-to-date consolidated statement of continuing ICAO policies and practices related to a global ATM system and communications, navigation and surveillance/air traffic management (CNS/ATM) systems

CIVIL MILITARY COOPERATION

(Presented by the United States)

EXECUTIVE SUMMARY

This information paper notes that effectual cooperation and coordination between civil and military authorities is essential. Civil/military compatibility and the establishment of joint coordination bodies for airspace management and air traffic control are essential to meet the future requirements for increased safety, security, capacity, efficiency, environmental and sovereignty, of air traffic operations. CNS/ATM initiatives and requirements cannot be fully realized without effective civil/military coordination. States need to ensure that military authorities are fully involved in airspace planning and aware of the new developments in civil aviation.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objectives A, B, C, D and E.
<i>Financial implications:</i>	No additional resources required.
<i>References:</i>	

1. INTRODUCTION

1.1 The safe and efficient co-existence of civil and military activity in a common airspace rests on the understanding and acceptance of the requirements by both civil and military airspace users, and the joint pursuit of mechanisms and procedures to ensure, as far as possible, the accommodation of those requirements on a fair and equitable basis.

1.2 The updated ICAO Global Plan focuses on operational and technical improvements that will bring near and medium term benefits to aircraft operators. Although the nature of military aviation differs from civil system users, they frequently operate in a mixed civil/military environment where they directly impact the performance of the air traffic management system. This ICAO Global Plan is a significant component in the development of regional and national plans. Those plans, together with the global ATM operational concept, provide an effective architecture for achieving a harmonized and seamless Global ATM system.

1.3 As roadmaps for future airspace structures are developed to meet evolving needs, air traffic service authorities need to give urgent consideration to the establishment of civil/military coordination bodies for airspace management and air traffic control. This strategy acknowledges the general defense, security and sovereignty needs of the State, and aims at assuring airspace to meet both civil and military airspace user requirements.

2. BACKGROUND

2.1 Article 3 (a) of the Convention on International Civil Aviation states that “this Convention shall be applicable only to civil aircraft, and shall not be applicable to state aircraft.” However, Article 3 (d) of the Convention states that “the Contracting States undertake, when issuing regulations for their state aircraft, that they will have due regard for the safety of navigation of civil aircraft.” Article 3 (b) states that “aircraft used in military, customs and police services shall be deemed to be state aircraft.”

2.2 The Standards and Recommended Practices detailed in Annex 11, “Air Traffic Services”, Chapter 2, paragraphs 2.15 and 2.16 contain provisions for coordination between military authorities and air traffic service providers and co-ordination of activities potentially hazardous to civil aircraft. These provisions specify that air traffic services authorities shall establish and maintain close cooperation with military authorities responsible for activities that may affect flights of civil aircraft. The provisions also prescribe that the arrangements for activities potentially hazardous to civil aircraft shall be coordinated with the appropriate air traffic services authorities and that the objective of this coordination shall be to achieve the best arrangements which will avoid hazards to civil aircraft and minimize interference with the normal operations of such aircraft.

2.3 Paragraph 2.17.5 of Annex 11, “Air Traffic Services” recommends that, in order to provide added airspace capacity and to improve efficiency and flexibility of aircraft operations, States should establish procedures providing for a flexible use of airspace reserved for military or other special activities. The procedures should permit all airspace users to have safe access to such reserved airspace.

2.4 The ICAO Manual Concerning Safety Measures Relating to Military Activities Potentially Hazardous to Civil Aircraft Operations (Doc 9554) identifies coordination between military and air traffic service authorities and air traffic service units. It also urges that civil and military coordination in the use of airspace is included, when appropriate, in the agenda of divisional and regional meetings.

2.5 During the Eleventh Air Navigation Conference held in Montreal, Canada from 22 September to 3 October 2003, considered the effect of military activity on the ATM system and expressed its view that processes of close coordination should be put in place in order to satisfy the needs of all airspace users and to assure overall safety.

2.6 The 35th Session of the ICAO Assembly, which was held from 28 September to 8 October 2004, in Montreal, Canada, resolved under Appendix P to Resolution A35-14, that: “the common use by civil and military aviation of airspace and of certain facilities and services shall be arranged so as to ensure the safety, regularity and efficiency of international civil air traffic.”

2.7 The scope of ICAO Global Plan Initiative 1, “Flexible Use of Airspace,” is the optimization and equitable balance in the use of airspace between civil and military users, facilitated through both strategic coordination and dynamic interaction.

3. DISCUSSION

3.1 Military aviation plays a vital role in national security and defense. The activity of State aircraft is a justified and legitimate activity that is required for national security and defense purposes. Therefore, it is a fundamental requirement that each state be able to train and operate its military forces to enable them to discharge their security and defense responsibilities. For that purpose, the integration of civil/military requirements into future CNS/ATM strategies should be a fundamental consideration.

3.2 Air transportation brings substantial economic benefits to our global society. Air travel and the global air transportation system have grown dramatically. The demand for air travel to double or triple by 2025 highlights the need for enhanced cooperation among airports, airspace users (both civil and military), air traffic service providers and States to improve the overall efficiency of the air traffic management system.

3.3 An important part of civil/military cooperation is the shared use of the airspace, and a good understanding of each other’s needs. Although military activity has decreased over the past several years, new generation aircraft, unmanned aircraft systems and updated tactics call for reevaluation of the use of airspace and its structure.

3.3.1 Civil and military aviation operations share similar requirements: on-time departures, user preferred routings, unrestricted climbs to cruise/optimum altitudes/step climbs, no duplication or unnecessary equipping, constant descent to landing, and no unnecessary vectoring.

3.3.2 Though slightly different, both civil and military aviation operations suffer the consequences of inefficient air traffic management services. Repercussions for inefficient operations for both civil and military mean carrying less cargo and using more fuel. For the military, this necessitates the requirement for more sorties and/or air refueling capability. In many cases, military has to equip with

redundant communication, navigation and surveillance equipment. For civil aircraft, the impact is fewer passengers, decreased revenue and increased expenses.

3.3.3 In order to meet defense and security needs, sufficient airspace to complete missions and training needs to be incorporated into any future plans. To accomplish their missions, military aircraft must be able to operate in all classes of airspace as required by assigned taskings. In addition to the dimension of airspace for military use, the distance from the air bases to the training/special use areas must be short enough to ensure an economic ratio between transit time and training time. The design of training/special use airspace may require the flexibility to change whenever new aircraft, weapons or tactics are introduced. Continual coordination between civil service providers and military users facilitates the ability to meet increasing needs of commercial traffic and the military's unique training and operational requirements.

3.3.4 Integrating the capability to manage civil and military operations into future air traffic management systems will need to be performance-based, vice specific equipment requirements and optimized for the entire aviation user community. It will need to be configured and allocated as a resource to meet the continuing needs of both civil and military operators. The system will have to be flexible enough to change as frequently as necessary. Environmental processes will need to be considered and incorporated.

3.4 Civil/military cooperation is not only about sharing airspace.

3.4.1 Efficient air traffic management procedures must be in place to ensure the separation of civil flights from military flights operating in special use airspace, and from military flights proceeding to special use airspace through civilian air routes.

3.4.2 In order to provide complete situational awareness, an automatic exchange of flight plans and flight intentions between civil and military needs to be supported. Tools need to be developed which provide a situational picture with regard to the reservations and actual use of special use airspace.

3.4.3 When considering aircraft equipage /mandates, it must be considered that specific equipage is not always possible for State aircraft. However, State and military authorities should recognize that it is in the best interests of all airspace users to equip. Close civil/military coordination needs to take place to balance reliable, predictable equipage requirements with evolving security and sovereignty requirements.

3.5 In the United States, civil/military cooperation is accomplished at every level. Policy and responsibilities for peacetime and wartime relationships between the Department of Defense (DoD) and the Department of Transportation are well established. At the strategic level, the Assistant Secretary of Defense for Networks and Information Integration (ASD NII) provides policy and oversight for National Airspace System matters, air traffic control, airspace management, military airports, and related development and acquisition activities for DoD aviation. The Executive Director for the DoD Policy Board on Federal Aviation provides the day-to-day liaison between the DoD and Federal Aviation Administration (FAA).

3.6 In 2003, Congress created the Joint Planning and Development Office (JPDO) to plan for and coordinate, with federal and nonfederal stakeholders, a transformation from the current air traffic control system to the "next generation air transportation system" (NextGen) by 2025. Housed within the FAA, JPDO has seven partner agencies: the Departments of Transportation, Commerce, Defense, and

Homeland Security; FAA; the National Aeronautics and Space Administration (NASA); and the White House Office of Science and Technology Policy. The DoD, as both a user and provider of air traffic services, and a regulator of both aircraft and operators, is an integral member of the nine JPDO working groups established to assess existing programs and develop future solutions in the areas of aircraft design, airports infrastructure, air navigation services, environment, global harmonization, net-centric information, safety, security and weather.

3.7 In order to facilitate civil/military cooperation, the ICAO Regional Offices in the Asia/Pacific, South America, North America and the Middle East regions have sponsored Civil/Military Cooperation Workshops/Seminars with the aim of developing regional guidelines to promote and improve civil/military cooperation. These workshops/seminars noted that effective cooperation and coordination between civil and military authorities was essential, and endorsed the principles of flexible use of airspace and equitable sharing of both convenience and inconvenience by civil and military users.

3.8 Recognizing the increased significance and demand for airspace by civil and military users, the DoD, in conjunction with the Air Traffic Control Association and American Association of Airport Executives, convened the Civil/Military Air Traffic Management Summit (CMAC) which was held 26 February to 1 March 2007 in Bangkok, Thailand. This unique summit, hosted by AEROTHAI of the Kingdom of Thailand, and supported by the FAA and ICAO, created an international forum for policymakers to discuss common issues and solutions to air traffic management problems. Over forty countries, from every continent, attended CMAC, which addressed significant areas of air traffic management including operations, airspace infrastructure, future systems, regional cooperation and global utilization.

3.9 States would also benefit from ICAO's continued involvement in the development and implementation of civil/military cooperation. ICAO should identify an appropriate mechanism to raise greater awareness of civil/military cooperation and to encourage all States to participate in regional and global dialogues on the need for interoperability and technology convergence to enable air operations in a mixed civil/military environment.

4. CONCLUSION

4.1 Coordination between the responsible military authorities and the appropriate air navigation service authorities is essential to the safety of civil aircraft operations wherever activities potentially hazardous to such operations are conducted by military units.

4.2 Despite the size or scope of a State's air transportation system, each State must recognize its own role in the larger global aviation system and take appropriate actions to ensure the continued viability of the shared civil/military aviation system.

4.3 The safe and efficient co-existence of civil and military activity in a common airspace rests on the understanding and acceptance of the requirements of both civil and military airspace users and the joint pursuit of mechanisms and procedures to ensure, as far as possible, the accommodation of those requirements on a fair and equitable basis, while taking into account State sovereignty requirements.

4.4 Civil/military cooperation is key principle to any air traffic management related changes. Military requirements are complex and at times more difficult to quantify than civil requirements. This illustrates the great importance of cooperation between civil and military authorities to actively identify

solutions that best meet the national security needs inside an air traffic environment with increasing capacity demands.

4.5 ICAO should note the integration and harmonization of civil/military cooperation currently being established in programs such as “NextGen” and Single European Sky ATM Research (SESAR). A harmonized system cannot be developed without partnerships between both domestic/international stakeholders and civil/military.

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