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ASSEMBLY — 35TH SESSION

TECHNICAL COMMISSION

Agenda Item 23: Consolidated statement of continuing ICAO policies and practices related to communications, navigation, and surveillance/air traffic management (CNS/ATM) systems

ESTABLISHMENT OF ARAB CONTROL

(Presented by Bahrain on behalf of the Member States of Arab Civil Aviation Commission (ACAC))

INFORMATION PAPER

SUMMARY

This paper describes the concept of the establishment of the Arab Control, an International Agency for the provision of Air Navigation Services on behalf of the participating Arab States which is foreseen to be established under the umbrella of the Arab Civil Aviation Commission. This is in response to several recommendations made by ICAO that called for the adoption of multinational approach for the provision of air navigation services and implementation of the CNS/ATM systems.

1. INTRODUCTION

1.1 It is obvious that the era of the simultaneous but uncoordinated development of CNS/ATM systems in the Arabian Region is definitely over. Two factors, namely, the considerable growth in air traffic and aircraft operators' desire for maximum economy of operation makes it essential that all Civil Aviation Authorities in the region work harmoniously to complement each other. The Air Navigation Committee of the ACAC created a special working group with a task to carry out studies on the establishment of the Arab Control. The working group at its first meeting concluded that the best approach would be the establishment of an Arab Control Agency to provide air navigation services on behalf of the participating States. This proposal was submitted to the General Assembly of ACAC member States during its 7th session, which was held on 23-24 June 2004. The Assembly approved the concept and developed a resolution on the continuation of the study and inviting States to participate. The Arab Control concept is based on the principles of independent air navigation service organizations operating their respective Flight Information Regions, which are harmonized through an Arab Control process. This paper provides a brief description of the concept, fundamental operational and business principles, the Arab Control Organization.

2. THE ICAO GLOBAL AIR NAVIGATION PLAN FOR CNS/ATM SYSTEMS

2.1 The ICAO Global Air Navigation Plan for CNS/ATM systems states that a major challenge in the implementation of CNS/ATM System elements is the multinational dimension: consequently, international cooperation will be required to a great extent throughout the implementation process and eventually in the future operational environment. It points out that many CNS/ATM systems elements may have to be implemented as multinational facilities and services. The international co-operation may take different form. In its simplest form, there is a co-ordination and harmonization process initiated as a sub-regional activity between a limited number of States. There are significant synergies to be created and savings to be made by co-ordinating planning, implementation and operation of the CNS/ATM systems across the border with neighboring States. On a larger scale more formal machinery may be established as an International Operating Agency.

2.2 An international operating agency is a separate entity assigned the task of providing air navigation services, principally route facilities and services, within a defined area on behalf of two or more sovereign States. The services provided by such an agency are usually in the categories of air traffic services, aeronautical telecommunications, search and rescue (essentially rescue coordinating centers) and aeronautical information services, but can extend to meteorological services for air navigation as well. These agencies are also responsible for the operation of charges collection systems for the services provided. Examples of such agencies are ASECNA (which operates airports as well as air navigation services), COCESNA and EUROCONTROL.

2.3 Taking into account all the major developments in the world in the field of air navigation services and particularity with regard to the CNS/ATM Systems planning and implementation. Also, noting that harmonizing and co-operating can ensure that the States develop collectively as a unit. The Air Navigation Committee of the ACAC recognized the necessity and importance of international co-operation within the region in the field of provision of air navigation services. Especially that similar mechanism exists in other regions and the ACAC would benefit from experience. This is in addition to the unique locations of the ACAC States interfacing Eurocontrol to the Middle East and AFI Regions. The special working group on the establishment of Arab Control have recommended that the best viable solution would be the establishment of an International Agency that is assigned the task of providing air navigation services on behalf of participating sovereign States of ACAC, The Arab Control.

3. THE ARAB CONTROL CONCEPT

3.1 “The Arab Control concept is based on the principle of Independent Air Navigation Service Organisations operating their respective Flight Information Regions, which are harmonised through an Arab control Process.”

The Arab Control is based on Hybrid FAA/Eurocontrol concepts and it:

- Provides for a regional Air Traffic Command Center
- Provides a mechanism for harmonization of ATCs
- Facilitates the implementation of the virtual ACC concept
- Follows the current world trends in Air Traffic Management

The Arab control Concept can be composed of the following:

- The founding countries in the Arab Region
- Extend to the rest of the Arab world in phases

4. THE ARAB CONTROL FUNDAMENTAL ELEMENTS

4.1 A set of fundamental elements are established on the basis that they are needed to achieve a consensus among the member States while at the same time improving the services provided to the users and reducing the cost of providing them. Such fundamental elements cover the operational and business elements as follows:

The Arab control Fundamental Operational Elements:

- Continuation of tactical air traffic control from the existing air traffic control units to maximize the use of the capital and human investments in place and to minimize the economic impact of change;
- Harmonization of operations between air traffic control units and their existing Flight Information Regions to improve the delivery of services and reduce costs;
- Centralization of functions where economies of scale can be achieved, e.g. user fee collection, Aeronautical Information Collection, publishing and distribution, and operational and technical training, and placement of these functions at appropriate locations in the member States; and
- Centralization of strategic air traffic control, e.g. flow control, central altitude reservation service.

The Arab control Fundamental Business Elements:

- Each air traffic control unit would be operated independently under the organization defined by the associated member State(s).
- Each operating organization can have whatever legal entity its respective Government wants it to have, e.g. part of the State government; a government(s) owned corporation, or a private corporation.
- Arab control would be a government owned corporation that provides centralized functions and supports the harmonization.
- Each Member State and operating organization would be a member of Arabian Control and subscribe to its principles.

5. FUNCTIONS OF INDIVIDUAL FIR'S & ASSOCIATED CONTROL FACILITIES

5.1 The individual flight information regions and associated control facilities would continue to operate as they do today unless the operating State or organization determines another scenario.

5.2 Existing facilities would be utilized and upgraded as required. The control facilities would provide the following functions in accordance with ICAO and individual State national standards and policies:

- **Flight Information Services:** Provides pilot pre-flight briefings. Facilitates the preparation and filing of aircraft flight plan. Disseminates system status information.
- **Air Traffic Services:** Provides air traffic synchronization, separation and flight assistance services.
- **Emergency and Alerting Services:** Provides assistance to aircraft in distress. Alerts Emergency Coordination Center of missing aircraft. Assists search and rescue operations in locating lost or downed aircraft.
- **Aviation Weather Services:** Collects and distributes aviation weather information.
- **Navigation Services:** Provides or arranges for the provision of navigation services in the airspace and at the airports within the flight information region.
- **Technical Systems Operation and Maintenance:** Operation and maintenance of air navigation technical facilities in the flight information region.
- **Facility Training:** While the Aviation College would assume responsibility for basic training, the facilities would retain the responsibility for local training on a specific airspace or procedure. In the technical arena the college might provide basic training and the facility would provide further training possibly on site.

6. FUNCTIONS OF THE ARAB CONTROL ORGANIZATION

6.1 The following are the proposed functions of the Arab Control organization relevant to specific location and the centralized functions assigned to the System Command Center:

a) Central Functions Assigned to Specific Locations

- **Aeronautical Information:** Publication of AIP and Aeronautical Information Circulars AIC's and associated charts and maps for the participating States.
- **Airline Coordination:** Coordination of strategic control actions with airlines operating in the region.
- **Aviation College:** Aviation training institute for the participating States.
- **Aviation Communications Switching Centers:** Switching centers that provide for communication of flight data, weather data, radar data, and other aeronautical information.
- **User Fee Collection:** Identification of user operation, preparation of invoices to users, collection of fees, distribution of funds to service providers, and accounting for financial management.
- **Aviation Research and Engineering:** Research and engineering services including technical studies and procurement preparation.
- **Safety, Security and Standards:** Monitoring function of the safety and security, development of necessary standards. This would include airports and navigation. facilities.

b) Centralized Functions Assigned to the System Command Center

The Arab Control System Command Center would perform a combination of the functions currently present in the Eurocontrol Central Flow Management and the United States Federal Aviation Administration Air Traffic Control System Command Center that are applicable to the Arab Control operational environment. The following are the functions assigned to the system command center:

- **Aviation Spectrum Management:** Investigates instances of frequency interference or misuse of aviation frequencies. Coordinates required Arabian Control frequency assignments with national spectrum management authorities.
- **Airspace Management and Central Altitude Reservation Function:** Coordination and allocation of fixed or dynamic portion of airspace for military use.

- **Flow Control and Central Flow Management Unit:** Plans re-routing of traffic flows around air navigation system bottlenecks. Provide strategic planning for traffic flows.
- **NOTAMS:** Receives, processes, and distributes NOTAMS that affect the operations in the airspace of the Arab Control Member States this would also include a central data base for international NOTAM's.
- **Technical Operation and Coordination:** Monitors the status of the technical facilities within the airspace of the participating States. Coordinates technical problems and prioritize corrective action.
- **Emergency Coordination Center:** Monitors the status, collects information on emergencies, issues alerts and coordinates the rectification of incidents.

7. **ACTION BY THE ASSEMBLY**

7.1 The Assembly is invited to:

- a) note the information provided in the paper;
- b) note the ACAC initiative for the establishment of Arab Control agency; and
- c) note that ACAC and participating founder States encourage other ICAO Member States to provide any possible assistance on the establishment of the Arab Control.

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