

## **APPENDIX**

### **THE NEW EUROPEAN MECHANISM FOR SPECTRUM AND FREQUENCY MANAGEMENT**

#### **1. BACKGROUND**

1.1 The availability of radio spectrum is vital for efficient air traffic management and its safety of life services. Failure to be able to meet the demand for radio spectrum reduces the potential air traffic capacity, thereby causing increased delays. Radio spectrum is of additional vital importance for military aviation users to ensure that national Security and Defence responsibilities can be executed efficiently, effectively and safely.

1.2 Spectrum management is a strategic function dealing with all radio spectrum band allocations, ensuring adequate radio spectrum free from harmful interference for aviation. Frequency Management is a tactical function dealing with the planning of all frequency assignments within individual aviation bands.

1.3 During their MATSE/6 meeting, ECAC Ministers of Transport recognized that radio frequency spectrum is a scarce resource with finite capacity limits and for which demand is constantly increasing. They called on EUROCONTROL to address the need for a strong mechanism for the management, assignment and audit of the use of aviation spectrum within the airspace of ECAC States, in close co-operation with States and ICAO.

1.4 In accordance with Directive No. 00/58 of 13 April 2000 of the Permanent Commission, the Agency was tasked to undertake the development and initiation of the plans and programmes stemming from the MATSE/6 decisions, including those with respect to radio frequency spectrum, in partnership with the Administrations of ECAC Member States and their respective Air Navigation Service Providers.

1.5 In parallel to this process, the European Commission submitted to the European Parliament and the Council in July 2000 a proposal for a regulatory framework in radio spectrum policy in the European Community.

#### **2. CURRENT SITUATION**

2.1 Many deficiencies in the existing spectrum and frequency management procedures were identified including a shortage of human and financial resources combined with duplication of effort by those scarce resources.

2.2 Global investment in spectrum-related issues is massive. There are over 85 different aviation and telecommunications groups working on these issues. Some 340 meetings are scheduled every year, consuming at least 85,000 man-days of effort. However, aviation attends less than 25% of these meetings and expends an estimated 1800 man-days.

2.3 Lack of a spectrum strategy makes it difficult to take into consideration, at an early stage, the impact of spectrum on aviation planning processes. Such a document would also provide useful input for the development of the ICAO position for the various World Radio Conferences (WRCs).

2.4 Lack of an endorsed Aeronautical European Common Position that includes both civil and military requirements impairs the ability of aviation to influence the highest political levels.

2.5 It is a pre-requisite that, at a European policy level, the protection of safety of life services must have priority over commercial interests, which is not necessarily the current situation. For its part, the aviation industry must provide evidence to support the argument for the levels of protection.

2.6 Spectrum is a finite and increasingly scarce resource and other industries are competing with aviation for spectrum. Additional allocations may be needed to satisfy existing and planned aviation requirements. Although new services may ultimately require additional allocation, in the first instance they should always be met from within existing aeronautical spectrum. This may require a review of current allocation and planning criteria.

2.7 Due to the global nature of aviation spectrum allocations, these allocations are especially attractive to non-aviation radio services. When there are proposals which may impact aviation spectrum, the response is often not available in due time and aviation is not always able to participate in the relevant fora because of resource difficulties.

2.8 Non-radio communication systems pose a threat. Historically, they have been considered as non-radiating systems, but practice has proven this not to be the case. For example, cable television can and does interfere with aviation very high frequency (VHF) communications and ATC navigation systems (VHF omni-directional radio range — VOR and instrument landing system — ILS).

2.9 Finally, aviation has to seek global allocations of spectrum if it is to achieve global interoperability and comply with international obligations. Aviation use must continue to be in accordance with International Telecommunications Union (ITU) Regulations; however, these may need to be revised to reflect evolving aeronautical applications/technical solutions.

### **3. THE NEW MECHANISM**

3.1 The new mechanism streamlines the management of both spectrum and frequency management. It is based on the understanding that States have the authority, and that they provide the service to their users. EUROCONTROL's role is one of support.

3.2 A set of new processes has been developed. This will achieve a greatly improved efficiency and ensure a pan-European coordinated activity.

3.3 A key requirement is the preparation of the Aeronautical European Spectrum Strategy and the Aeronautical European Common Position.

3.4 A Spectrum Frequency Consultation Group, comprising a wide range of interested parties, has been established to oversee this work. It will assist in coordinating representation at key meetings thereby substantially reducing unnecessary effort.

3.5 Automation tools are being implemented to support the new mechanism processes.

#### 4. **CONCLUSIONS**

4.1 Radio spectrum is a vital resource for aviation. Air traffic capacity depends on adequate spectrum being available. However, expertise in this field is scarce and so it must be used efficiently.

4.2 The new mechanism will allow a pan-European set of processes to be implemented that will improve efficiency and also transparency. This will allow aviation to improve its arguments for additional spectrum by, among other things, demonstrating that existing spectrum is being effectively managed.

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