



Brussels,
DG CONNECT/B4

MANDATE TO CEPT TO UNDERTAKE TECHNICAL STUDIES REGARDING THE POSSIBILITY OF MAKING THE USAGE OF THE NETWORK CONTROL UNIT (NCU) OPTIONAL ON BOARD MCA ENABLED AIRCRAFT PURPOSE

1. PURPOSE

The purpose of this mandate is to study the possibility of making the usage of the Network Control Unit (NCU) optional within Mobile Communications on board Aircraft (MCA), in order to satisfy the EU policy objectives listed below.

The NCU is part of the MCA onboard system. It is designed to ensure that signals transmitted by ground-based mobile systems are not detectable within the aircraft cabin and that the user terminals on the aircraft only transmit at a minimum level so that they only register with the onboard Base Station.

MCA providers have argued that a technical solution based just on the onboard Base Station would be sufficient to prevent mobile devices from attempting connections to the ground. According to this assumption, the benefits of the NCU would be negligible. Enabling MCA systems without NCU would make the system simpler and cheaper, thus favouring a broader adoption of MCA and therefore reducing the number of "uncontrolled" active mobile devices. It must also be considered that the NCU, which deliberately creates electromagnetic noise in a number of frequencies, is itself a potential source of interference.

2. EU POLICY OBJECTIVES

Better regulation: the EU has taken the engagement to design policies and laws so that they achieve their objectives at minimum cost. This ensures that policy is prepared, implemented and reviewed in an open, transparent manner, informed by the best available evidence and backed up by involving stakeholders. To ensure that EU action is effective, the Commission assesses the expected and actual impacts of policies, legislation and other important measures at every stage of the policy cycle - from planning to implementation, to review and subsequent revision.

Competitiveness: should technical studies prove that the MCA services without NCU could coexist with terrestrial mobile networks, imposing the installation and periodical upgrade or substitution of such a component on the whole fleet of MCA enabled aircraft would constitute an undue hindrance to competitiveness.

Socioeconomic dimension: Simplifying and making less expensive the requirements for MCA operation contributes to a wider and faster adoption of aeroconnectivity systems, therefore enabling a wider number of citizens to remain connected when they travel.

3. JUSTIFICATION

Commission Decision 2008/294/EC of 7 April 2008 on harmonised conditions of spectrum use for the operation of mobile communication services on aircraft (MCA services) in the Community, as modified by Commission Implementing Decision 2013/654/EU¹, foresees the obligation to install a Network Control Unit² in all MCA enabled aircraft.

Implementing Decision 2013/654/EU imposes, *inter alia*, the upgrading of NCUs in order to cover new terrestrial mobile frequencies. This involves several steps including the design, certification, airworthiness certification, marketing and installation (which can be done only in the occasion of major aircraft maintenance overhauls). Therefore, in Decision 2013/654/EU, Article 2 granted a delay for the application of the new NCU parameters on the 2.6 GHz frequency band *until 1 January 2017*.

Meanwhile, at this stage, no interference case has been reported to or from terrestrial wireless systems. Furthermore, every day some mobile terminals are inadvertently left in "transmit" mode in "non-connected" aircraft. It should however be noted that the sources of interference (as well as of any signalling issues) on mobile networks are more and more difficult to detect. Considering the above mentioned deadline of 1 January 2017, and the industrial, operational and administrative timing linked to the possible future implementation of updated Network Control Units, there is the need for a tight timing of the assessment of the current approach.

Pursuant to Article 4(2) of the Radio Spectrum Decision³ the Commission may issue mandates to the CEPT for the development of technical implementing measures with a view to ensuring harmonised conditions for the availability and efficient use of radio spectrum necessary for the functioning of the internal market. Such mandates shall set the tasks to be performed and their timetable.

Therefore, the Commission considers that the request put forward by AeroMobile⁴ in the context of consistent implementation of the RSPD objectives of efficient management and use of spectrum, bridging the digital divide, enabling the Union to take the lead in wireless electronic communications, promoting innovation, developing effective competition, avoiding harmful interference and disturbance and fostering the accessibility of new consumer products and technologies, justify the need for technical studies to identify the

¹ Commission Implementing Decision 2013/654/EU, of 12 November 2013, amending Decision 2008/294/EC to include additional access technologies and frequency bands for mobile communication services on aircraft (MCA services). OJ L303, 14.11.2013, p.48

² According to Article 2 (4) of Decision 2008/294/EC, "*network control unit (NCU) means equipment to be located in the aircraft that ensures that signals transmitted by ground-based mobile electronic communication systems listed in Table 2 in the Annex are not detectable within the cabin by raising the noise floor inside the cabin in mobile communication receive bands*".

³ Decision 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community, OJL 108 of 24.4.2002

⁴ Aeromobile White Paper: RSCOM 15-24.

possibility to make Network Control Units optional in the framework of Mobile Communications onboard Aircraft (MCA).

4. TASK ORDER AND SCHEDULE

CEPT is herewith mandated to undertake work to determine the possibility to make the installation of a Network Control Unit on board MCA equipped aircraft optional.

The work will need to verify that a MCA configuration without NCU is sufficient to guarantee a reasonable protection against interference and signalling issues to and from terrestrial wireless telecommunication systems. The term "reasonable" must be seen in the light of "real life operations" keeping in mind the fleet mix (MCA and non MCA equipped aircraft, number of mobile terminals which remain operational also in non MCA equipped aircraft, etc.).

In the work carried out under the Mandate, the general and specific policy objectives of the RSPP, such as effective and efficient spectrum use and the support for specific Union policies shall be given utmost consideration. In implementing this mandate, CEPT shall, where relevant, take utmost account of EU law applicable and support the principles of service and technological neutrality, non-discrimination and proportionality insofar as technically possible.

CEPT should provide deliverables under this Mandate according to the following schedule:

Delivery date	Deliverable	Subject
March 2016	Interim Report from CEPT to the Commission	Description of work undertaken and interim results.
June 2016	Final Draft Report from CEPT to the Commission	Description of work undertaken and final results subject to public consultation.
December 2016	Final Report from CEPT to the Commission, taking into account the outcome of the public consultation.	Description of work undertaken and final results.

CEPT is requested to report on the progress of its work pursuant to this Mandate to all meetings of the Radio Spectrum Committee taking place during the course of the Mandate.

The Commission, with the assistance of the Radio Spectrum Committee and pursuant to the Radio Spectrum Decision, may consider applying the results of this mandate in the EU, pursuant to Article 4 of the Radio Spectrum Decision.