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Commission Decisions on Mobile Communication Services on Aircraft - Frequently Asked Questions

What is meant by mobile communication services on aircraft (MCA)?

It means in-flight phone calls, e-mail type data communication and messages sent or received by passengers using their own everyday mobile phones. It does not include aircraft-specific phones, such as those integrated within the aircraft seat that are made available by some airlines, nor does it cover operational communications made by and to the aircraft's crew.

This service is currently limited to GSM1800 technology. The generic term mobile communication services on aircraft (MCA) is preferred to the previously used "GSM on-board" because other mobile technologies such as 3G could also be deployed in the future, depending on market demand.

What are the technical requirements for airlines that wish to offer mobile services to passengers during flights?

Airlines need to install MCA equipment, which is being produced by several mobile equipment manufacturers. This consists of a "picocell" (a very small mobile base station or mobile "mast") and a "Network Control Unit". The Network Control Unit stops onboard phones trying to connect directly with land-based cellular networks, which are not designed to deal with high-speed movement. Until now, the potential disturbance to land-based mobile networks was one reason for prohibiting mobile phone use in planes.

The other reason was the risk of high-power transmissions from mobile phones in aircraft interfering with on-board navigation and avionics equipment. This risk, already small, is made remote by the MCA service, which introduces a controlled environment inside the cabin forcing all mobiles to connect only to the MCA system. Mobile phones need to use much less power to connect to the base station that is only a few metres away and on board the aircraft itself, rather than a base station that is on the ground. Furthermore, each aircraft offering this service undergoes stringent aeronautical testing before the MCA equipment is installed to ensure that the aircraft is capable of supporting the MCA service without safety consequences.

The third element in the MCA system is a satellite link connecting the aircraft to public phone networks on the ground. The same satellite link is already being used for operational communications with the crew of the aircraft.

Why was it necessary for the European Commission to get involved in MCA? Could these services not be dealt with by national authorities?

As planes in Europe typically cross several borders during flights, coordination at the European level is the only way to enable one of the first truly pan-European communication services. In order to ensure that new pan-European business innovations like MCA have the opportunity to be assessed by the market, undue regulatory obstacles and delays to commercial deployment need to be removed. A particular difficulty within Europe has been the heavy national bureaucracy involved for operators in having to deal with 27 or more national administrations at once, often requiring different solutions to very similar problems.

In August 2007, the European Commission has already taken similar steps to encourage the development of pan-European mobile satellite services ([IP/07/1243](#)).

So, concretely, what has the Commission done?

The starting point of the EU's involvement in MCA was the funding of the WIRELESS CABIN research and development project between 2000 and 2002, which delivered the technological development required to make in-flight telephony a realistic proposition (see <http://wirelesscabin.triagnosys.com>).

Now that the technological solution has been developed, the Commission aims to simplify and speed up market access for MCA operators by removing as much "red tape" as possible. For this purpose, two measures have today been adopted by the Commission:

- A **Commission Recommendation** for a harmonised approach on licensing which will promote **mutual recognition between national authorisations for mobile communications services on board aircraft**.
- A **Commission Decision** which sets out **harmonised technical parameters of onboard equipment for in-flight mobile phone use throughout the EU** that will allow Member States to recognise each other's licences for mobile communications on board aircraft without risk to mobile networks on the ground.

The full texts of the legal instruments adopted today are available at: http://ec.europa.eu/information_society/policy/radio_spectrum/ref_documents/index_en.htm

The on-going certification of MCA systems with respect to air safety has also been undertaken at EU level, via the European Aviation Safety Agency. The Commission has furthermore encouraged national security authorities to share their know-how and views on elements of MCA related to justice and home affairs.

Has the Commission consulted stakeholders while preparing these measures?

In October 2007, regulatory aspects of MCA in the EU were discussed at a workshop between all stakeholders in Brussels, including national and European regulators, operators, airlines and consumer representatives.

Representatives of the Member States and national regulatory authorities were fully involved in drafting final versions of the measures adopted today and gave very broad support to the proposed approach.

Further information on the Workshop with stakeholders is available at:

http://ec.europa.eu/information_society/policy/radio_spectrum/workshops/workshop_mca_3_oct_07/index_en.htm.

What is the pricing policy applicable to MCA? Is it one fixed price or does it depend on the country the aircraft is flying over?

During flight, each aircraft will effectively be a single "network in the sky" for MCA customers, so the price will not be affected by the aircraft's location.

Who will determine the cost of calls made on board?

The service provider of the customer (i.e. the home cellular network operator that furnishes the invoice) will set the retail price, taking into account all charges, including agreements with the MCA provider, the air carriers, the satellite service providers, and other mobile network operators.

How will the caller and receiver be charged for the calls?

They will be charged through their existing mobile account, as if they were placing a call from abroad or using another mobile network while outside the reach of their regular service provider.

What about customers using pre-paid cards?

It depends. People using their phones abroad are often not allowed to use their pre-paid cards, unless they are roaming on networks that have a co-operation agreement with operator they use at home. Otherwise they have a service subscription which supports international roaming and they can use their cards abroad. This will also be the case for MCA.

Does the EU's Roaming Regulation of June 2007 apply to calls made to/from MCA?

The EU Roaming Regulation (IP/07/870), which will be reviewed before the end of 2008, has been adopted by the European Parliament and the Council of Ministers in June 2007 primarily to deal with the issue of roaming on *terrestrial* networks. The definitions of the Regulation therefore do not apply to MCA, even though it is in many respects similar to a roamed service.

The EU Roaming Regulation expresses a very important single market principle that the European Commission would like to see broadly applied and that can be defined as follows: irrespective of location in the EU, one and the same communication service should not be more expensive for the consumer than in his or her home country unless there is a clear justification (such as additional cost for the operators). This principle of course applies not only to the situation of using a mobile phone in another country, but also to the use of a mobile phone in an airplane crossing several EU Member States.

In a market economy, prices for communication services should first of all be determined by market forces. This applies especially to MCA, which is still a nascent service and still has to find to its business model(s). The Commission therefore finds it preferable to give commercial forces the chance to work. However, it is clear that the take-up of MCA would be best served if mobile network operators pursue from the beginning a transparent pricing policy and avoid prices which would be considered excessive by consumers or even represent shock bills. The European Commission will keep a close eye on how this market develops.

Who will provide in-flight mobile phone services? How can I find out more about it?

Although the market will fluctuate and evolve in the coming months and years, depending on consumer take-up, two companies have been created specifically to develop MCA services and are most advanced in this field. A number of airlines have announced cooperation agreements with these operators.

Will all mobile devices be allowed on board?

The commercial systems currently envisaged are focussing on MCA services for GSM phones operating in the 1800 MHz frequency bands, which over 90% of air passengers are estimated to carry when travelling. The legal instruments adopted today by the Commission address this technology at first, but will be extended to other standards if there is demand for them.

A minimum altitude restriction of 3000 metres will apply to the use of this service. Does this rule out the use of mobile phones on many short-haul flights altogether?

Nearly all European commercial flights reach a non-critical phase of flight or "cruising phase" over 3000 metres above ground. In other words, MCA will nearly always be available, even if only for short periods of time on some flights – which is similar to having to rush breakfast before you have to fold away your tray on the plane!

What is the Commission doing for passengers who do not want to be disturbed by mobile phone use during flights?

The role of the Commission is to create the legal and technical conditions that help new service providers and are required in a single market. As long as safety and security are ensured, the way in which commercial services are provided is a decision essentially for the private sector. The social aspects related to the use of MCA technology therefore should be handled by the airlines as part of their usual relationship with their customers, keeping in mind the special situation in aircraft cabins where one passenger is normally located closely to another. Airlines may, for example, remind or require passengers to turn mobile phones to silent mode; to switch off the MCA service in particular circumstances, such as during turbulence or at night; or designate certain areas of the aircraft cabin as 'quiet areas' where mobile phone use is prohibited, as is the case on certain train carriages.

Will aircraft flying outside EU airspace have to switch off their mobile phone service? Would this make calling on the plane unreliable?

If the aircraft is in international airspace (i.e. more than 12 nautical miles from any country), the rules and regulations of the country where the airline is registered apply: if the MCA operator has a national licence in that country, the aircraft can use the service. If the aircraft is in airspace of a country that is not part of the EU, the MCA operator normally will need an authorisation from that country to operate its service, unless there is a special agreement between that country and the EU allowing for mutual recognition.

It is likely that other countries (especially neighbouring countries) will align themselves to the European approach, and the Commission believes Member States will accept non-EU aircraft operating MCA systems, as long as their technical operating parameters are the same as those used in the measures agreed today

In any case, airlines and MCA operators are unlikely to launch the service on given routes without the guarantee of reasonably continuous operation for the passenger.