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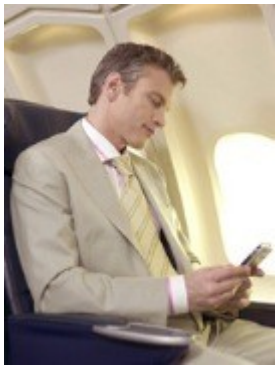
[1]

Often, aircraft are among the few places where mobile phones cannot function. But this is now changing in Europe; new rules and conditions set out in 2008 allow air passengers to call from above the clouds.

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The right equipment for calls in the sky

Mobile communications on aircraft (MCA) covers the in-flight use of normal mobile phones and other devices to make calls, send and receive messages, and other communications such as e-mail.

Regular fliers will be familiar with the usual request to "switch off all mobile phones when on board the aircraft" - because high-power transmissions from such devices can interfere with the plane's avionics. However, in an aircraft fitted with MCA equipment, a controlled communications environment is established in the cabin, so all mobile phones connect to the MCA at low power.

MCA equipment consists first of a 'picocell' – a very small mobile base station; and second of a network control unit that stops onboard phones connecting with land-based networks that cannot cope with phones moving at high speed. (This potential disruption to land-based networks was another reason for the prohibition on mobile phone use in commercial airliners.)

The third element of the MCA set-up is a satellite link connecting the aircraft to public phone networks on the ground. This link is already used by the aircraft crew for operational communications.

To ensure minimal risk to terrestrial networks, the use of MCA is restricted to aircraft cruising at an altitude of 3000 metres or above. This includes the vast majority of flights in Europe.

Current Situation

By the end of 2011 - two and a half years after the Commission's regulatory measures - a number of airlines were testing out MCA services and some already offering in-flight connectivity to their

passengers in Europe.

The most recent development is the plan to modify the existing Commission Decision in order to allow for new frequency ranges and new technologies, such as 3G (UMTS) and potentially 4G (LTE), to be used in aircraft. To prepare for this, the Commission, together with the EU Member States, launched a **Second Mandate to CEPT** [2] [2]to undertake technical studies on Mobile Communication on board Aircraft (MCA) in October 2011. Pursuant to this Mandate, CEPT is currently working on the relevant compatibility studies and the Radio Spectrum Committee will then consider the results of the studies, possibly with a view to an amended Decision in 2013.

Commission coordination

Airlines in Europe typically cross several borders during flights so coordination at the European level is crucial to achieve a truly pan-European MCA service.

Between 2000 and 2002, the EU's research project "Wireless Cabin" assessed the feasibility of MCA. The project successfully demonstrated the technology and showed that interference with on-board and external systems was negligible.

With the technology in place and available for deployment, the Commission, following wide-scale consultation, published two measures to ease the bureaucracy involved in launching MCA services in practice.

The first is a Commission Recommendation on a harmonised approach to licensing, which will promote mutual recognition between national authorisations for mobile communications on board aircraft. Complementing this, the second is a Commission Decision that sets out the harmonised technical parameters for on-board equipment for in-flight mobile phone use throughout the EU. This will allow Member States to recognise each others' licences for mobile communications without a risk to mobile networks on the ground.

This sets a unified environment for providing pan-European MCA services through existing, or new, commercial providers. Availability and pricing are matters for market operators (e.g. airlines); as are issues like passenger comfort.

More information

- **Commission Recommendation** [3] 2008/295/EC of 7 April 2008 on authorisation of mobile communication services on aircraft (MCA services) in the European Community.
- **Commission Decision** [4] No. 2008/294/EC of 7 April 2008 on the harmonised conditions of spectrum use for the operation of mobile communication services on aircraft (MCA services) in the Community
- Press release **"First European airlines offering in-flight use of mobile phones thanks to EU-wide ground rules"** [5] (2 April 2009)
- **Get involved** [6]

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