



**MOBILE PHONE USE DURING FLIGHT
FIRST BRIEF FOR INFLIGHT MANAGEMENT
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Background

- Mobile phones are defined as both non-intentional (stand-by) and intentional (in use) transmitting personal electronic devices.
- There are several technologies used by mobile phone operators, AMPS for analog communications, and TDMA, CDMA, GSM, GPRS, EV-DO and UMTS for digital.
- Each network operator uses specific radio frequency bands.
- Mobile phone use is currently prohibited during all phases of flight due to potential interference with aircraft navigation systems, with some countries allowing use prior to takeoff until the aircraft door is closed, or after landing once the aircraft door is opened.
- Over the past two years, a number of technology companies have been investigating ways of providing use of mobile phones during flight.
 - **Onair (SITA) with Airbus** and **AeroMobile (AIRINC) with Boeing** are each proposing the use of a picocell in the aircraft cabin to connect calls via satellite to a designated global ground infrastructure. Calls to other ground services would be blocked.
 - Note that **Connexion by Boeing** allows Internet connectivity during certain phases of flight while transmitting through a special antenna, as opposed to a picocell.
- The final decision to allow use of mobile phones during certain phases of flight rests with the Civil Aviation Authority of each country and/or region (e.g. Federal Aviation Administration (FAA) in the U.S., European Aviation Safety Agency (EASA) in Europe, etc.).
- If mobile phone use during flight were ever authorised using a picocell, mobile phones would still have to be turned off below 3000 meters.

Current Status

- Regulatory bodies in the U.S., Europe and Asia are actively reviewing mobile phone use during flight.

International Air Transport Association

Route de l'Aéroport 33
PO Box 416
CH - 1215 Geneva 15 Airport
Switzerland
Tel: +41 22 770 2525
Fax: +41 22 798 3553

U.S.

- In February 2005, the Federal Communications Commission (FCC) submitted a proposal to rescind its ban on mobile phone use during flight, but received 8000 responses to its public consultation and the decision is still pending.
- Even if the FCC rescinds its ban, FAA regulations would still apply. The FAA has commissioned the Radio Technical Commission for Aeronautics (RTCA) to conduct technical studies on the use of picocell on aircraft. Results are expected by the end of 2006.

Europe

- Technical studies are being carried out by the equipment standardisation group (EUROCAE) and the Spectrum Engineering working group of the Electronic Communications Commission (ECC), the 46 European Member States' forum for radio spectrum negotiations.
- The ECC working group on Regulatory Affairs has prepared a draft proposal on the use of picocell on aircraft, which only deals with potential interference with terrestrial systems. The proposal will be issued shortly for public consultation during summer 2006.
- Each Member State can also conduct its own public consultation (e.g. Ofcom in the U.K.).
- Even if a favourable decision were reached by the ECC, aviation certification by the Civil Aviation Authority of each Member State and/or by the EASA would still be required.

Asia

- Discussions are going on in the Asian telecommunications group about the use of picocell on aircraft. There is no regional body like the ECC in Asia so each country must decide separately.
- Aviation certification by each country's Civil Aviation Authority would still be required.

IATA's Role

- IATA's position is that any solution arrived at must ensure safety and security.
- IATA has been asked by its Members to stay close to this issue and provide background information and relevant updates on an ongoing basis.
- IATA has set up an interdisciplinary group to study this issue and provide information to its Members.

Implementation Considerations

If the use of mobile phones during certain phases of flight is ever approved by Civil Aviation Authorities, any airline wishing to introduce this service should take into account the following considerations prior to implementation. The items mentioned below do not represent an exhaustive list of considerations and are intended to provide IATA Members with the most accurate and up-to-date information as possible, in order to improve the decision making process.

Safety

- For years the Industry has been saying that mobile phone use during flight can interfere with aircraft navigation systems. If mobile phone use were to be authorised during certain phases of flight, passengers must understand why it is now safe and that it will still not be safe below 3000 meters.

NOTE: An Industry standard announcement could provide assistance.

- Cabin Crew and/or Flight Crew should be able to turn off the picocell at any time, and in particular below 3000 meters. However, it may be difficult to ensure that all passengers have turned off their mobile phones. This could increase the risk of interference with aircraft navigation systems and the potential for signal leakage outside the aircraft.

NOTE: Suppliers are looking into the possibility of automatically putting mobile phones to “sleep” when the picocell is turned off.

- Safety announcements must remain a priority and therefore the picocell needs to at least automatically put mobile phone conversations on hold, the same way the IFE system interrupts automatically during safety announcements.

NOTE: Suppliers are looking into turning off the picocell automatically during safety announcements, consequently cutting off conversations. This could increase the risk of air rage. For the same reason as above, this could also increase the risk of interference with aircraft navigation systems and the potential for signal leakage outside the aircraft.

- Some passengers may be inconvenienced by phone conversations made around them, by the timing of some phone conversations (e.g. during night flights), or by the use of hands free devices, etc. This could increase the risk of air rage.

NOTE: Suppliers are looking into adding a switch Voice & Data / Data Only (e.g. SMS messages). Each airline may also wish to establish rules for mobile phone use during flight.

- As only seven mobile phones, or up to fourteen by reducing bandwidth, can simultaneously access a picocell, it may be difficult for passengers to make connection. This could increase the risk of air rage.

NOTE: Suppliers are looking into the possibility of installing an illuminated signal, similar to the ones used for toilets. Of course, more than one picocell can be installed on the aircraft to increase capacity.

- The various technologies used by mobile phone operators, the potential for unharmonised regulation, the fact that each airline can decide whether or not to offer this service, and the timeline required to retrofit aircraft will result in situations where passengers can use mobile phones on one flight but not the next, thereby creating confusion. This could increase the risk of air rage.

NOTE: Each airline may wish to develop a plan to manage passenger expectations.

Security

- In the U.S., the Federal Bureau of Investigation (FBI) and Homeland Security have advised the FCC that any rule permitting mobile phone use during flight must consider safety and national security, including the ability to record conversations.

NOTE: Some airlines flying from/into the U.S. may face privacy issues with this recommendation.

Health

- The most recent study shows no association between mobile phone use and brain tumour.
- Results of a major European study on the potential health impact of radiation from mobile phones should be released in 2007.
- We are not aware of any study being conducted on the potential health impact of radiation from picocell devices.

For more information

To get more detailed information, airlines can consult the following websites.

http://www.faa.gov/other_visit/aviation_industry/designees_delegations/training/de_r_present/la_sep/media/walen-mobile%20phones.pdf

<http://www.rtca.org/pressroom/default.cfm?id=1>

<http://www.ofcom.org.uk/research/telecoms/reports/aircraft/aircraft.pdf>

<http://www.fcc.gov/cgb/consumerfacts/mobilephone.html>

http://www.onair.aero/en/index_en.asp

<http://www.arinc.com/products/aeromobile/>

http://www.airbus.com/en/presscentre/pressreleases/pressreleases_items/15_Sept_04_Airbus_Successfully.html

http://www.connexionbyboeing.com/news/releases/2005/q3/nr_050808j.html

For further information, please contact Benoit Pilon at +41 22 770 2713 or inflight@iata.org