



**INFORMATION AND COMMUNICATION  
TECHNOLOGIES AUTHORITY (ICTA)**

Level 12, The Celicourt 6, Sir Celicourt Antelme Street Port Louis Mauritius  
Tel.: (230) 211 5333/4 Fax: (230) 211 9444 email: icta@intnet.mu

---

Document Ref.: ICTA/DEC/01/2010

**Information and Communication Technologies Authority  
Decision of 17 May 2010 on Mobile Communication  
Services On Aircraft (MCA Services)**

## Explanatory memorandum

- 1) The ICT Authority has as one of its functions, under section 18(p) of the Information and Communication Technologies Act 2001, to *"allocate frequencies and manage, review, and, where appropriate, reorganise the frequency spectrum"*;
- 2) The ICT Authority has as one of its objects, under section 16(g) of the Information and Communication Technologies Act 2001, to *"further the advancement of technology, research and development relating to information and communication technologies through modern and effective infrastructure taking into account the convergence of information technology, media, telecommunications, and consumer electronics"*;
- 3) The ICT Authority has received representations from two foreign companies requesting it to give consideration to the use GSM phones onboard both Mauritian aircrafts and foreign aircrafts engaged in innocent passage in the airspace of Mauritius. Both representations express the views that there is an increasing interest from users for such services.
- 4) The ICT Authority had conducted a public consultation exercise in order to gather the views of all stakeholders on the provision of mobile services on board both Mauritian and foreign aircrafts.

## Background

- 1.1 Until recently the use of mobile phones on board aircrafts was not permitted because of the potential interference they represent to essential on board systems. However research by operators and airlines suggests that there is consumer demand for such services, and there is now commercial interest in addressing the technical issues so as to enable a robust and reliable public mobile service on aircraft.<sup>1</sup>
- 1.2 The Terrestrial Flight Terrestrial System (TFTS), used in the nineties allowed passengers on board aircrafts to make phone calls using the handset attached to the seats. TFTS provided connection to public telecommunications networks through a radio link between the aircraft and ground stations. The passengers paid for their communication with their credit cards.
- 1.3 Because of the increasing interest for mobile communication many organisations have been looking at the possibility of having a GSM system on board the aircraft, allowing passengers to use their own mobile phones during certain states of flight.

## 1.4 System Description

The GSM on board system consists of a pico base station to which the mobile terminals connect through the standard GSM interface, with passengers' handsets roaming onto the onboard network when flying above 3,000 metres. The onboard cell is connected to terrestrial networks via a satellite link as shown in figure 1.

---

<sup>1</sup> Mobile Services on Aircraft Discussion paper on the introduction of mobile services on aircraft, Ofcom, 10 April 2006

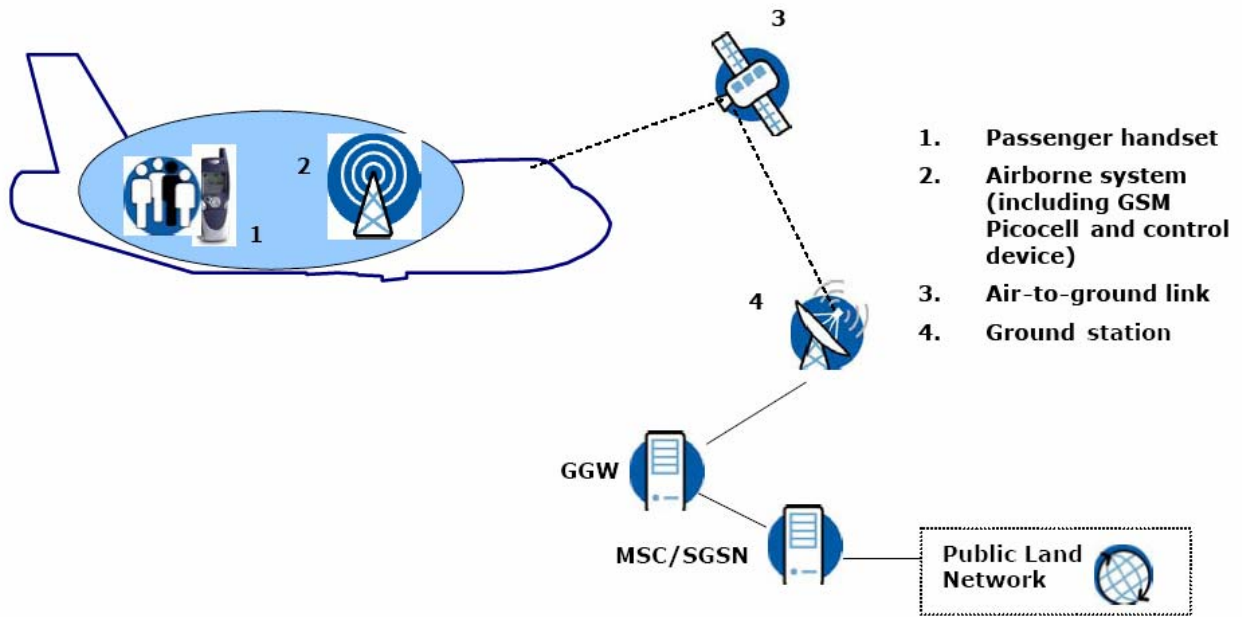


Figure 1 - Overview of the MCA System and associated components<sup>2</sup>

The MCA System operates in the 1710 – 1785 MHz and 1805 – 1880 MHz (GSM 1800) frequency bands. GSM 1800 has been chosen mainly for technical reasons. The minimum transmit power for terminals being lower than those in the GSM 900 and the fact that path loss is higher at higher frequencies makes it easier to avoid interference to ground-based systems. Also, most GSM terminals support the 1800 MHz band.

<sup>2</sup> CEPT Report 016, 12 June 2007

**ICT Authority Decision  
of 17 May 2010  
on Mobile Communication Services On Aircraft (MCA Services).**

**(ICTA/DEC/01/2010)**

The Information and Communication Technologies Authority in the exercise of its statutory functions under the Information and Communication Technologies Act 2001, as amended, issues the following Decision pursuant to Section 17(3) combined with Sections 18(1)(p) and 16(g) of the said Act. This decision shall come into force with immediate effect.

The Information and Communication Technologies Authority,

CONSIDERING THAT,

- a. The ICT Authority had conducted a public consultation exercise on the operation of mobile communication services on board both foreign and Mauritian aircrafts;
- b. The ICT Authority has received four responses to the consultation exercise, namely from the Civil Aviation Department, one Public Land Mobile Network operator in Mauritius and two foreign organizations;
- c. The Civil Aviation Department has voiced out its concern regarding safety with respect to the effects of MCA systems on avionics equipment.
- d. Public Land Mobile Network operator is agreeable to the fact that foreign aircrafts be allowed to operate GSM on board systems during innocent passage over the territory of the republic of Mauritius, provided no harmful interference is caused to the ground based networks.

DECIDES

1. that the operation of Mobile Communication Services on Aircraft, be allowed for foreign aircrafts engaged in innocent passage in the airspace of Mauritius subject to the following conditions:-
  - (i) These MCA Systems be operational only when the aircraft is in the cruising mode and flying at least 3000 meters above the ground.
  - (ii) The MCA system shall at no time be operational during taxiing, taking-off or landing within the territory of the republic of Mauritius or at any other time when the aircraft may be stationed in Mauritius.
  - (iii) The MCA System shall operate in the 1710 – 1785 MHz and 1805 – 1880 MHz (GSM 1800) frequency bands.
  - (iv) These MCA Systems shall operate within the limits specified in the ECC Decision (06) 07 and shall at no time cause any interference to the ground based networks in Mauritius.
  - (v) The aircraft should have obtained all necessary airworthiness certifications and authorisations with respect to the MCA system in its home country.
2. that ICT Authority reserves its decision concerning the operation of MCA Services on board Mauritian aircrafts until such time when the appropriate conditions regarding aircraft safety shall be determined in collaboration with the Civil Aviation Department.