

QUESTION ITU-R 249/5

Technical characteristics and operational requirements of wireless avionics intra-communications (WAIC)

(2009)

The ITU Radiocommunication Assembly,

considering

- a) that as wireless technologies continue to evolve, the aviation industry anticipates increasing demands for both safety and non-safety short-range wireless applications to be installed onboard aircraft for intra-aircraft communication;
- b) that the use of wireless systems onboard aircraft creates unique opportunities for reducing weight and complexity in aircraft design providing more cost-effective flight operations, easing and reducing down time for installation and maintenance, and supporting more efficient aircraft system upgrades that maintain or improve the level of safety and enhance performance over the aircraft's useful lifetime;
- c) that because commercial aircraft cross national boundaries and are global by nature, use of the same types of wireless avionics intra-communications (WAIC) systems will encourage the benefits of the same standardization and economies of scale in manufacturing and supporting such systems;
- d) that WAIC systems are envisaged to be designed to enhance spectrum reuse and ensure protection of other services or systems;
- e) that WAIC systems are envisioned to be accommodated in existing allocations to mobile services, including the aeronautical mobile services,

noting

that the use of wireless systems onboard aircraft is expected to reduce aircraft weight and fuel consumption, thereby benefiting the environment,

decides that the following Questions should be studied

- 1 What types of existing wired systems are envisioned to be converted to WAIC systems?
- 2 What types of new applications could be implemented as WAIC systems?
- 3 Under which radiocommunication services could WAIC systems be operated?

4 What technical characteristics, operational and bandwidth requirements, protection criteria, and performance objectives should be associated with the WAIC systems that would be used for the applications identified in *decides* 1 and 2, taking into account *decides* 3?

5 What is a practical number of identified WAIC systems that could coexist in the same frequency band with minimum mutual and external interference?

6 What techniques can be used by the WAIC systems to ensure compatibility with other existing applications or radio services, taking into account *decides* 2?

7 What are the spectrum requirements for WAIC?

further decides

1 that the results of the above studies should be included in one or more Recommendation(s) and/or Report(s);

2 that the above studies should be completed by the year 2011;

3 that this Question should be brought to the attention of ICAO.

Category: S2

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