INTERNATIONAL TELECOMMUNICATION UNION

Radiocommunication Bureau
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Administrative Circular
CA/109

3 December 2001

To Administrations of Member States and
Radiocommunication Sector Members of the ITU

Subject: Request for administrations and Sector Members to supply data on existing and planned wideband aeronautical telemetry systems operating at frequencies above 3 GHz

1 Introduction

The 2000 Radiocommunication Assembly approved Question ITU-R 231/8, titled: *Operation of wideband aeronautical telemetry in bands above 3 GHz*. The 2000 Radiocommunication Assembly directed that Question ITU-R 231/8 studies are to be completed by 2005.

The World Radiocommunication Conference 2000 included item 2.12 in the preliminary agenda for the World Radiocommunication Conference 2005/2006. It reads: *to consider spectrum requirements for wideband aeronautical telemetry in the band between 3 GHz and 30 GHz.*

The result of studies under Question ITU-R 231/8 will support the World Radiocommunication Conference 2005/2006 in its deliberations concerning Agenda item 2.12 of that conference.

Neither Question ITU-R 231/8 nor Agenda item 2.12 (WRC-05/06), in dealing with spectrum requirements for aeronautical telemetry above 3 GHz, negates the requirement for aeronautical telemetry spectrum below 3 GHz, which will continue.

Administrations and Sector Members are requested to supply information regarding existing and planned usage of the radio frequency spectrum above 3 GHz for the purposes of wideband aeronautical telemetry so that the studies under Question ITU-R 231/8 can be completed as required by 2005. Annex 1 contains a list of parameters that may assist in meeting the objectives of this work. Respondents are also requested to supply data considered relevant to this task even if the particular data has not been identified in the Annex.

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2 Objective

The objective is to develop appropriate Recommendations covering the following topics (see Question ITU-R 231/8):

- What is the spectrum requirement for wideband aeronautical telemetry in the bands above 3 GHz?
- What are the appropriate frequency bands and in which bands is harmonized worldwide usage possible?
- What are the technical and operational characteristics, or practical arrangements that could be made, to facilitate sharing between wideband aeronautical mobile telemetry and incumbent radio services?

3 Submission of contributions

Administrations and Sector Members are urged to submit the information requested at the latest on 15 April 2002.

Contributions should be sent, if possible in a standard electronic format, to Mr George Wardle (Australia), Tel: +61 2 6266 4784, Fax: +61 2 6266 3646, via the reflector site (wp8b-aerotlm@itu.int) set up by the ITU for this purpose.

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Robert W. Jones
Director, Radiocommunication Bureau

Distribution:

- Administrations of Member States of the ITU
- Radiocommunication Sector Members
- Chairmen and Vice-Chairmen of Radiocommunication Study Groups and Special Committee on Regulatory/Procedural Matters
- Chairman and Vice-Chairmen of the Radiocommunication Advisory Group
- Chairman and Vice-Chairmen of the Conference Preparatory Meeting
- Members of the Radio Regulations Board
- Secretary-General of the ITU, Director of the Telecommunication Standardization Bureau, Director of the Telecommunication Development Bureau

ANNEX 1

Questionnaire on spectrum requirements for existing and planned wideband aeronautical telemetry at frequencies above 3 GHz

I FOCAL POINT REGARDING CORRESPONDENCE ON THIS QUESTIONNAIRE

1. Mr/Ms _____ _____
   Family Name First Name
2. Country _____
3. Name of Administration/Organization _____
4. Title _____
   _____
5. Address _____
   _____
   _____
   _____
6. Telephone: _____ Fax: _____ E-mail: _____

II DEFINITION

Wideband Aeronautical Telemetry is defined as:

> ***Emerging Telemetry Systems With Large Data Transfer Requirements to Support New and Different Telemetry Capabilities (such as high resolution video and associated data for remotely-piloted aeronautical vehicles).***

This questionnaire will be used to further refine this definition by providing technical and operational characteristics of the data transfer requirements and new telemetry capabilities.

III WIDEBAND AERONAUTICAL TELEMETRY SPECTRUM REQUIREMENTS ABOVE 3 GHz

1. Does your administration or organization employ or plan to employ wideband aeronautical telemetry systems at frequencies above 3 GHz?

2. If the answer to Question 1 is affirmative, please complete relevant details in the table in Annex 1, and supply any additional information which you feel may assist in identifying spectrum requirements for wideband aeronautical telemetry above 3 GHz. In particular, the following points may assist in compiling the requested information:

a) Does your administration or organization contemplated a need for wideband aeronautical telemetry spectrum above 3 GHz?

b) If so, what kinds of systems/programs are contemplated, and how much spectrum is needed to accommodate such systems/programs?

c) Which frequency bands does your administration have with appropriate national allocations and with sufficient spectrum, such that provisions could be made for use by wideband aeronautical telemetry?

d) In which geographic areas or regions does your administration or organization employ or plan to employ wideband aeronautical telemetry systems at frequencies above 3 GHz?

e) What are the technical and operational characteristics of projected wideband aeronautical telemetry systems that would operate above 3 GHz?

f) Are there arrangements that could be made to facilitate sharing between wideband aeronautical mobile telemetry and incumbent radio services (particularly terrestrial radio services) in the candidate bands above 3 GHz?

g) If so, please identify these arrangements.

Technical parameters of existing and planned wideband aeronautical telemetry systems operating at frequencies above 3 GHz				
Parameter	**System/ Function 1**	**System/ Function 2**	**System/ Function 3**	**System/ Function 4**
Frequency range (MHz)				
Tuning range of equipment (min and max frequencies)				
Necessary bandwidth (MHz)				
Transmit power e.i.r.p. (dBW)				
Duration of transmissions				
Vehicle speed				
Vehicle antenna type(s)				
Vehicle antenna beamwidth(s)				
Ground station antenna type(s)				
Ground station antenna beamwidth(s)				
Ground station antenna tracking accuracy (degrees)				
Required data rate				
Required quality of data (BER)				
Maximum allowable signal degradation (I+N)/N				
Area or region where aeronautical telemetry employed				
Purpose/function of system				
Sharing arrangements				