QUESTION ITU-R 276/4[[1]](#footnote-1)\*, [[2]](#footnote-2)\*\*

Availability of digital paths in mobile-satellite services

(2009)

The ITU Radiocommunication Assembly,

considering

*a)* that service interruptions may be caused by natural and man-made phenomena, e.g. solar interference, interference from other systems, ignition noise, attenuation due to multipath or atmospheric effects, which adversely affect the wanted signal and in the case of digital transmission systems, result in bursts of errors;

*b)* that use of appropriate techniques and inclusion of equipment redundancy, etc., can improve service availability;

*c)* that system parameters such as receive signal margins affect the link, and therefore system availability;

*d)* that connection availability requirements may not be the same for different application types and directions of transmission;

*e)* that since the link between the land earth station and the mobile earth station comprises two sections, the fixed (feeder) link and the service link (satellite to mobile), they need to be considered independently;

*f)* that the performance of mobile earth stations will be subject to environmental conditions that vary not only with time but also with the location of the stations within the satellite coverage area,

decides that the following Questions should be studied

1 What is the definition of availability in a hypothetical reference digital path of the mobile-satellite services for the different application types of transmissions?

2 What are the realistically achievable system/link availabilities of each element of a mobile-satellite system and of the complete system ?

3 What is the technical relationship between availability and propagation characteristics?

further decides

1 that the results of the above studies should be included in appropriate Recommendations and/or Reports;

2 that the above studies should be completed by 2027.

Category: S2

1. \* This Question should be brought to the attention of Radiocommunication Study Group 3. [↑](#footnote-ref-1)
2. \*\* This Question should be studied in conjunction with Question ITU-R 277/4. [↑](#footnote-ref-2)