QUESTION ITU-R 233/4[[1]](#footnote-1)\*

Dedicated user digital satellite communications systems
and their associated architectures

(1995)

The ITU Radiocommunication Assembly,

considering

*a)* that dedicated/user-oriented networks external to the ISDN using capacity of international, regional and national satellite systems are being established;

*b)* that there are various alternative architectures and corresponding reference digital paths and user requirements for these networks;

*c)* that more information and criteria on technical and operational matters associated with such systems would be useful in the development of economical satellite systems;

*d)* that these networks may include the use of very small aperture terminals (VSAT) in the earth segment, which may be dedicated to a single user;

*e)* that new fixed-satellite service networks involving a large number of low-Earth orbit satellite and the associated earth stations are being developed, and that these networks also involve multiple intersatellite links;

*f)* that digital satellite links will continue to form part of evolving digital networks carrying a variety of services including those of the ISDN;

*g)* that it would be desirable to establish various network architectures for digital satellite links to provide designers of equipment and systems with guidance for their implementation;

*h)* that these network architectures may help designers in allocating impairment for digital transmission links,

decidesthat the following Questions should be studied

1 What network architectures are conceivable and preferable to facilitate the design and construction of dedicated user systems for digital transmission?

2 What network architectures are preferable from overall cost efficiency, taking § 1 into account?

3 What are the preferred user requirements for performance and availability on the satellite link?

4 What are the factors which characterize alternative network topologies, system architectures and link control protocols?

5 What is the impact of the network requirements on the characteristics of the earth stations?

6 What are the standardized dedicated user/network digital interfaces to be recommended?

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. \* Radiocommunication Study Group 4 made editorial amendments to this Question in the year 2023 in accordance with Resolution ITU-R 1. [↑](#footnote-ref-1)