

QUESTION ITU-R 233/4

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 Question ITU-R 78/4 exists to investigate the integration of satellites into the B-ISDN;
- h) 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;
- j) that these network architectures may help designers in allocating impairment for digital transmission links,

decides that the following Question 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 these studies should lead to the formulation of an appropriate Recommendation by 2006.
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