

## QUESTION ITU-R 82/6<sup>\*</sup>

### **Technical characteristics of feeder links to broadcasting satellites operating in the 12, 17 and 21 GHz bands**

(1993-2000)

The ITU Radiocommunication Assembly,

*considering*

- a) that under the Radio Regulations, the Earth-to-space paths used for the feeder links between earth stations at specified fixed points and satellites used for services other than the fixed-satellite service (FSS) (including the broadcasting-satellite service (BSS), all the mobile-satellite services, all the radionavigation-satellite services, the meteorological-satellite service, and the Earth-exploration satellite service) are a part of the FSS;
- b) the need for ample information on the characteristics of feeder links for planning the BSS;
- c) that in the implementation of broadcasting-satellite systems, consideration must be given to all aspects of associated space operation service functions (tracking, telemetry, telecommand and ranging) in connection with the operation of broadcasting satellites;
- d) that in the implementation of feeder links serving the BSS, full consideration should be given to the operational requirements of that service;
- e) that a number of different FSS (Earth-to-space) bands including FSS (Earth-to-space) allocations either identified for or restricted to feeder link use by WARC-92 are potentially available for feeder links to future broadcasting satellites that use the bands allocated to the BSS at WARC-92,

*decides* that the following Question should be studied

- 1** What are the most appropriate technical characteristics for feeder links for the BSS and what is the most appropriate method for utilizing the radio-frequency channels of the feeder links in the allocated bands; in particular, those characteristics which would be necessary to permit frequency assignments for different orbital positions to be made independently of each other?
- 2** Is there any consequent limitation on the orbital position resulting from other design features of the feeder-link earth station(s)?
- 3** What are the techniques that could be used in the feeder-link considerations which could result in an efficient flexible and economic design of the overall service?
- 4** What are the technical considerations which need to be considered in the choice of frequency for the feeder links relative to the downlink frequency?

NOTE 1 – See Recommendations ITU-R BO.652 and ITU-R BO.1296,

*further decides*

- 1** that the results of the above studies should be included in (a) Recommendation(s);

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<sup>\*</sup> This Question should be brought to the attention of Radiocommunication Study Group 4.



2 that these studies should be completed by 2003.

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