QUESTION ITU-R 214/4

Technical implications of steerable and reconfigurable satellite beams

(1993)

The ITU Radiocommunication Assembly,

considering

*a)* that possibilities exist both for steerable or reconfigurable beams by telecommand, and also for dynamically steerable or reconfigurable beams on a time-division basis;

*b)* that steerable and reconfigurable satellite beams represent one means of adapting satellite capacity to unforeseeable changes in telecommunications traffic distribution during the increased lifetimes in orbit;

*c)* that steerable and reconfigurable satellite beams help to facilitate relocation of satellites in orbit hence offer a way of improving orbit utilization;

*d)* that steerable and reconfigurable satellite beams can be incorporated in space division multiple access and on-board processing schemes which improve the connectivity and degree of utilization of individual satellites and hence increase the efficiency of use of the geostationary-satellite orbit;

*e)* that the concept of steerable and reconfigurable beams poses problems for the application of the Radio Regulations, since a single discrete coverage area is not applicable;

*f)* that, whilst one solution to the regulatory problem would be to coordinate all the geographical areas which it is technically possible for a steerable or reconfigurable beam to cover, in some cases this would imply an inordinate number of coordination exercises;

*g)* that, whilst an initially simpler solution would be to coordinate only those coverage areas to which it is proposed to direct the beams during the early period of the satellite's orbital life, this would leave the operators uncertain of the future usability of the steerable or reconfigurable facilities,

decides that the following Questions should be studied

1 What are the full implications of steerable and reconfigurable satellite beams for coordination procedures?

2 Are there any parts of the Radio Regulations which would need to be amended to provide more adequately for steerable and reconfigurable satellite beams?

3 What solutions are possible to the problems posed by steerable and reconfigurable satellite beams for frequency coordination procedures?

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 2025.

Category: S1