International Telecommunication Union

ITU-R

Radiocommunication Sector of ITU

Recommendation ITU-R SM.855-1

(10/1997)

Multi-service telecommunication systems

SM Series

Spectrum management

Foreword

The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including satellite services, and carry out studies without limit of frequency range on the basis of which Recommendations are adopted.

The regulatory and policy functions of the Radiocommunication Sector are performed by World and Regional Radiocommunication Conferences and Radiocommunication Assemblies supported by Study Groups.

Policy on Intellectual Property Right (IPR)

ITU-R policy on IPR is described in the Common Patent Policy for ITU-T/ITU-R/ISO/IEC referenced in Resolution ITU-R 1. Forms to be used for the submission of patent statements and licensing declarations by patent holders are available from http://www.itu.int/ITU-R/go/patents/en where the Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC and the ITU-R patent information database can also be found.

Series of ITU-R Recommendations

(Also available online at http://www.itu.int/publ/R-REC/en)

Series	Title
BO	Satellite delivery
BR	Recording for production, archival and play-out; film for television
BS	Broadcasting service (sound)
BT	Broadcasting service (television)
F	Fixed service
M	Mobile, radiodetermination, amateur and related satellite services
P	Radiowave propagation
RA	Radio astronomy
RS	Remote sensing systems
S	Fixed-satellite service
SA	Space applications and meteorology
SF	Frequency sharing and coordination between fixed-satellite and fixed service systems
SM	**Spectrum management**
SNG	Satellite news gathering
TF	Time signals and frequency standards emissions
V	Vocabulary and related subjects

Note: *This ITU-R Recommendation was approved in English under the procedure detailed in Resolution ITU-R 1.*

Electronic Publication
Geneva, 2011

RECOMMENDATION ITU-R SM.855-1*

MULTI-SERVICE TELECOMMUNICATION SYSTEMS

(1992-1997)

Scope

This Recommendation provides the calculation methods of interference between single service and multi service by electromagnetic compatibility procedures.

Keywords

Multi-service telecommunication, spectrum sharing, electromagnetic compatibility analysis

The ITU Radiocommunication Assembly,

considering

a) that the radio spectrum is used more efficiently when multiple users within the same part of the spectrum can operate at the same time without interference;

b) that the increasing requirements of new radio services can only be realized through the implementation of new technologies;

c) that the advances of new technologies increase band utilization;

d) that a multi-service system provides for more than one type of radiocommunication service within the same waveform;

e) that multi-service telecommunication systems create no unusual interference problems to single service systems;

f) that the interference between single service and multi-service systems can be calculated by using electromagnetic compatibility procedures;

g) that it is possible to identify the sharing potential of multi-service systems with other users, in a common allocated band, based on electromagnetic compatibility analysis,

recommends

1 that, when appropriate, multi-service telecommunication systems should be used to obtain efficient use of the radio spectrum;

2 that the spectrum sharing should be based on the electromagnetic compatibility analysis between the signal waveform of the multi-service systems and other systems.

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* Radiocommunication Study Group 1 made editorial amendments to this Recommendation in the years 2011 and 2019 in accordance with Resolution ITU-R 1