

International Telecommunication Union

ITU-R
Radiocommunication Sector of ITU

Recommendation ITU-R SM.1270-0
(07/1997)

**Additional information for monitoring
purposes related to classification
and designation of emission**

SM Series
Spectrum management



Foreword

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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.

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RECOMMENDATION ITU-R SM.1270-0*

**ADDITIONAL INFORMATION FOR MONITORING PURPOSES RELATED TO
CLASSIFICATION AND DESIGNATION OF EMISSION**

(1997)

Scope

This Recommendation emphasizes the collection of the information about different types of emissions which are mentioned in RR Appendix 1 and Recommendation ITU-R SM.1138, and provides the structure of the database.

Keywords

Classification of emission, structure of database, monitoring services

The ITU Radiocommunication Assembly,

considering

- a) that due to new techniques and technical capabilities the number of teletype and other methods of communication is increasing;
- b) No. 19.1 of Article 19 of the Radio Regulations (RR);
- c) that the designation of emission in five characters mentioned in RR Appendix 1 and in Recommendation ITU-R SM.1138 is sufficient for frequency management purposes;
- d) that for monitoring purposes these five symbols for the classification of emission are inadequate for unambiguous and complete characterization of emissions,

recommends

- 1 that specified additional information should be collected by administrations on the different types of emissions;
- 2 that a common database should be created at a place accessible to all monitoring services;
- 3 that the structure of the database should be in accordance with Annex 1.

ANNEX 1

Structure of the database

<i>Field name</i>	<i>Type</i> (Note 1)	<i>Length</i>	<i>Description</i>
SYSTNUM	I	4	System number starting with 0001
SYSNAME	A	20	common used system name like: SITOR, ROU-FEC, PACKET, TOR-342, etc.
TYPE	A	20	System type Possibilities: start/stop burst type ARQ pulse train FEC twinplex SITOR multitone navigation/location
ALPHABET	A	8	Used alphabet like ITA-2, SITOR, ITA-5
BITS	A	5	Number of bits per character
DET_COR	A	20	Detection/correction system parity, mark/space ratio 3:4, etc.
MARK_CY	A	10	Mark cycle every 4, 5 or 8 characters can be inverted to enable the receiver to synchronize.

* Radiocommunication Study Group 1 made editorial amendments to this Recommendation in the years 2010 and 2019 in accordance with Resolution ITU-R 1.

REP_CY	A	10	Repetition cycle If the receivers detects one or more corrupted characters it asks for repetition of a number of characters.
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The following three fields can be used in case of multitone systems and twinplex si_tor.

PULSE	I	3	For multitone systems these fields can be 100/200/008 which means PULSE duration 100 ms
SEP	I	3	SEParation between tones 200 Hz
NUMB	I	3	NUMBer of tones: 8 For twinplex si_tor systems these fields can be 200/280/510 which means that the separation between f_1 and $f_2 = 200$ Hz, between f_2 and $f_3 = 280$ Hz and between f_3 and $f_4 = 510$ Hz In both cases this information can often be enough to identify the country using this system without knowing the text of the messages.
BETWEEN	A	10	In case of multitone systems the limits of the used tones e.g. 1 220-1 860 Hz
IDLE	A	10	In case of multitone systems the tones in use during an idling period.

For many systems there are a number of parameters depending on the baudspeed. If a system has the possibility to use different baudspeeds it is still the same system.

Baudspeed dependent parameters must be stored in a second database with a relation in a field of the first database. In this case that must be the field SYSTNUM.

For every possible baudspeed of a particular system there must be a record in this second database.

This database contains the following fields:

<i>Field name</i>	<i>Type</i> (Note 1)	<i>Length</i>	<i>Description</i>
SYSTNUM	I	4	System number for relation with the first database
BAUDSPEED	D	8,2	Baud speed of system, e.g. 164.35 Bd
AUTO_CORR	I	4	Peak of the auto correlation function, the number of bits in a character frame
BIT_DUR	D	5,2	Duration of the bits, e.g. 10,30 ms
CYCLE	I	4	Cycle time of the system, time needed to transmit one character frame
INFO	I	4	Time which CYCLE time contains information
PAUSE	I	4	Time of CYCLE time without transmission
CHAR	I	3	Number of characters in one burst example: For a si_tor transmission CYCLE time = 450 ms INFO = 210 ms PAUSE = 240 ms CHAR = 3

These databases will not cover all the possibilities. To create such a database is almost impossible, would be too complicated and does not meet the requirements of the monitoring engineer to have an easy to use and flexible tool.

NOTE 1 – A: alphanumeric RR
I: numeric (integer)
D: numeric (decimal)