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| **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

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.

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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 |

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| ***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[[1]](#footnote-1)\*

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

(1997)

Rec. ITU-R SM.1270

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

|  |  |  |  |
| --- | --- | --- | --- |
| *Field name* | *Type* (Note 1) | *Length* | *Description* |
| 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. |
| REP\_CY | A | 10 | Repetition cycle |
|  |  |  | If the receivers detects one or more corrupted characters it asks for repetition of a number of characters. |

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:

|  |  |  |  |
| --- | --- | --- | --- |
| *Field name* | *Type* (Note 1) | *Length* | *Description* |
| 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)

1. \* Radiocommunication Study Group 1 made editorial amendments to this Recommendation in the years 2010 and 2019 in accordance with Resolution ITU-R 1. [↑](#footnote-ref-1)