

RECOMMENDATION ITU-R SM.1270

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

(Question ITU-R 1/1)

(1997)

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) that Article 25, No. 2055 (Article S19) of the Radio Regulations (RR) stipulates that: "All transmissions shall be capable of being identified either by identification signals or by other means";
- c) that the designation of emission in five characters mentioned in RR Article 4, Section II (Article S4) and in Recommendation ITU-R SM.1138 (RR Appendix 6, Part A) 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 (Note 1)</i>	<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.
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:

<i>Field name</i>	<i>Type (Note 1)</i>	<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)