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Subject: Report ITU-R SM.2130-1

English only

Russian Federation

PROPOSED REVISION TO REPORT ITU-R SM.2130-1

Inspection of radio stations

Introductory remarks

Report ITU-R SM.2130-1, as well as ITU Spectrum Monitoring Handbook, edition 2011, and ITU Handbook on National Spectrum Management, edition 2015, does not focus on the requirements concerning calibration of measuring equipment used in the inspection of radio installations. However, in some cases, the results of the inspection can initiate severe measures against violators and authorities must be absolutely sure in the proper accuracy and legality of measurements.

This contribution is intended to fill this gap as it concerns Report ITU-R SM.2130-1.

It is proposed to revise Report ITU-R SM.2130-1 as follows:

- 1) Sections 1-10 7 of the Report to be unchanged.
- 2) Add new section 8 as follows:

8 Calibration

The issue of calibration of equipment intended for inspection purposes requires special attention. Notably on results of the inspection serious enforcement measures can be applied in accordance with the national legislation, such as heavy fines, confiscation of emission sources (such as radio transmitters, industrial, medical or scientific installations, etc.), and even law prosecution. Therefore, radio frequency authorities conducting measurements must be absolutely sure that the measurements are made by equipment that fully corresponds to its declared characteristics and parameters, which must be appropriately validated and documented.

Moreover, it fairly may happen that the calibration performed by radio frequency authorities themselves, even in full compliance with the calibration procedures established by manufacturers of measuring equipment, will not be sufficient. The user/owner of emitting equipment may well appeal against imposed sanctions, referring to the unreliability of measurements that are carried out by equipment calibrated by the measurer themselves, but not by an independent measuring organization with the proper state accreditation. In this case, the radio frequency authorities may well lose the claim of the user/owner of the emitting equipment and thus the implemented enforcement measures will be ineffective.

Therefore, during the inspection process, at least critical measurements that may lead to serious enforcement measures should be performed by a measuring equipment that has been verified and calibrated by an independent measuring organization with appropriate state accreditation, which should be appropriately validated and documented. The corresponding certificate must contain at least the following information:

- full details of an organisation which has carried out the verification and calibration of measuring equipment together with data concerning state accreditation of the organisation;
- place and date of verification/calibration;
- indication of the verification/calibration method used;
- confirmation that the equipment fully complies with the technical characteristics declared by the manufacturer of the equipment, with reference to the relevant documentation of the manufacturer;
- the date of the next verification/calibration.

If, due to organizational features, the radio frequency authorities of a country use the same measuring equipment for both radio monitoring and inspection, the above requirements apply to all such equipment.

Due to saving reasons, calibration of DF equipment in all cases can be carried out by the radio frequency authorities themselves on the basis of the methods provided by the equipment manufacturer. This is because DF does not affect the measurement of the characteristics of the emitting equipment to be inspected. The coordinates of this emitting equipment, if necessary, can be additionally and independently measured using an available global satellite navigation system.

Some possible options for how this type of independent calibration of measuring equipment can be achieved are presented in section 2.7.5 “Calibration” of the ITU Spectrum Monitoring Handbook, Edition 2011.

3) *Renumber the existing section 8 to 9.*
