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TECHNICAL REPORT

INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

Specification for radio disturbance and immunity measuring apparatus and methods –
Part 4-6: Uncertainties, statistics and limit modelling – Statistics on radio frequency interference (RFI) and verification by measurements in the field

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CISPR 16-4-6 has been prepared by CISPR subcommittee H: Limits for the protection of radio services. It is a Technical Report.

The text of this Technical Report is based on the following documents:

Draft	Report on voting
CIS/H/504/DTR	CIS/H/513/RVDTR

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Report is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the CISPR 16 series, published under the general title *Specification for radio disturbance and immunity measuring apparatus and methods* , can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

In 2018, work started in CISPR/H to undertake a fundamental review of CISPR TR 16-4-4:2007, CISPR TR 16-4-4/AMD1:2017 and CISPR TR 16-4-4/AMD2:2020 [1][1] . As a result of this review, it was decided to transfer the content on statistics of complaints in Clause 4 to a new publication, as the content of this clause was quite disconnected from the limit modelling part of CISPR TR 16-4-4 [1]. A cross-reference list of CISPR TR 16-4-4 [1] and this document is given in Annex E. Note that with reorganization of CISPR 16 in 2003, the recommendations on statistics of interference complaints were moved from CISPR TR 16-3:2002 (first edition) to Clause 4 of CISPR TR 16-4-4:2003 (first edition).

In the past interference on analogue radio reception, for example television, was easy to detect. With the shift to newer technologies the recognition of interference is more difficult. Nevertheless, submission of statistical data on complaints is still considered an important instrument to verify the suitability of CISPR publications, as they are widely adopted in various regions and countries for market access of equipment.

The recommendations for reports on statistics of complaints in CISPR TR 16-4-4 were found also to be outdated and not suitable to analyse and interpret the interference complaints that are often reported within CISPR and its subcommittees. Therefore, it was decided also to add additional recommendations in this new CISPR publication to enable proper analysis of these complaints and subsequently to implement appropriate changes in the CISPR publication concerned. With these additions, this CISPR publication on statistics of radio frequency interference serves as a more meaningful feedback loop on how effective the limits and test methods in CISPR publications are.

This CISPR publication is intended for any party having an interest in aggregation and subsequent submission of statistical data to CISPR, either as a CISPR liaison, or via the respective National Committee. It addresses radio frequency interference incidences and reported cases which could be traced back to having been caused by use as intended in the given category of electromagnetic environment, of any kind of electric/electronic equipment, system or installation being conformant with the provisions of CISPR standards.

This document provides a methodology for the systematic collation, aggregation and verification of interference in the given environment, or in general any investigations into reported radio frequency interference cases.

The latter more administrative activity incorporates the aggregation of statistical data on interference complaints. These could be traced back to having been caused by operation and use of any kind of closely co-located and well-maintained or also defective electric/electronic equipment, systems or installations and radio receivers in the field or also by other shortcomings in the local conditions of use of such equipment, radio receivers, or by lack of service coverage or other reasons. This document can be used to prepare reports on the statistics of interference complaints in line with the provisions set out in Chapter IV, Article 15, Section VI of the ITU Radio Regulations 2020 [2], see also Appendix 10 of these ITU Radio Regulations [2].

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[1] Numbers in square brackets refer to the Bibliography.

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1 Scope

This part of CISPR 16, which is a Technical Report, applies to the acquisition, processing and preparation of statistical data of radio interference cases to facilitate the evaluation of the effectiveness of CISPR standards with respect to their potential to prevent radio frequency interference (RFI).

This document also provides a method for the analysis and evaluation of the residual risk of occurrence of the incidence of RFI in the electromagnetic environment.

This document also provides guidance for how an interested party can verify the root cause of RFI. This can be applied to either a reported RFI case or a case otherwise suspected of constituting an “RFI scenario”, by inspection and field strength measurements at the local site in the given electromagnetic environment.

Acquisition of statistical data according to this document only encompasses RFI incidences which affect radio reception by radio receivers or respective receiver components.

2 Normative references

There are no normative references in this document.