



**Fixed Radio Systems;
Parameters affecting the Signal-to-Noise Ratio (SNR)
and the Receiver Signal Level (RSL) threshold
in point-to-point receivers;
Theory and practice**

Reference

DTR/ATTM-04015

Keywords

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Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Access, Terminals, Transmission and Multiplexing (ATTM).

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**may not**", "**need**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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Introduction

Digital Fixed Radio Systems (DFRS) had been historically specified in a relatively large number of specific European Norms produced by ETSI. These ENs were prepared separately and, even if the list of standardized parameters was common to all these ENs, their specific values were defined on a case-by-case basis. The content of the old Point-to-Point ENs was further transferred into the multipart standard EN 302 217 [i.4] while in a first time most of the parameters values were kept unchanged.

As a consequence the RSL figures provided in earlier versions up to V1.4.1 of EN 302 217-2-2 [i.2] are an array of values proposed at different times and corresponding to different technology situations.

1 Scope

The present document provides guidance for the definition of a full set of rationalized RSL values based on the most recent technological state-of-the-art and determined using a common set of rules for all P-P systems within the scope of EN 302 217 [i.4].

As part of the rationalization effort of EN 302 217 [i.4], the present document proposes technical parameters to be used as basis in the calculation of the RSL figures.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

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2.1 Normative references

The following referenced documents are necessary for the application of the present document.

Not applicable.

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI EN 302 217-1: "Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 1: Overview and system-independent common characteristics".
- [i.2] ETSI EN 302 217-2-2: "Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 2-2: Digital systems operating in frequency bands where frequency co-ordination is applied; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive".
- [i.3] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (R&TTE Directive).
- [i.4] ETSI EN 302 217 (all parts): "Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas".
- [i.5] IEEE 802.16: "IEEE Standard for Air Interface for Broadband Wireless Access Systems".
- [i.6] Recommendation ITU-R F.1101: "Characteristics of digital fixed wireless systems below about 17 GHz".