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Background for Radio Frequency (RF) requirements
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Foreword

This Technical Report has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

1.1 General

The present document gives background information on how the RF requirements of GSM400, GSM900 and DCS 1800 systems have been derived.

1.2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TR 45.820, 'Cellular System Support for Ultra Low Complexity and Low Throughput Internet of Things'
- [2] 3GPP TS 45.001, 'Physical layer on the radio path;General description'
- [3] 3GPP TS 45.003, 'Channel coding'
- [4] 3GPP TS 45.004, 'Modulation'

2 Information available

The present document collects together temporary documents of ETSI SMG and STC SMG2 and 3GPP GERAN which can be seen as base line material for the RF requirements in GSM 05.05. The documents are divided into several clauses

In each clause there is a short description of the documents. The documents themselves are annexed to this report.

A list of phase 2 change requests to SMG2 related documents are annexed to the SMG meeting reports.

3 DCS1800 system scenarios

There are two documents describing the basis of the DCS1800 RF requirements. They are:

- DCS1800 System scenarios (TDoc SMG 259/90, reproduced as TDoc SMG 60/91).
- Justifications for the DCS1800 05.05 (TDoc SMG 260/90, revised as TDoc SMG 60/91)).

These documents have been derived first by the UK PCN operators and later by GSM2 ad hoc group working on DCS 1800 requirements during 1990. The documents were presented to TC SMG in October 1990.

DCS1800 System Scenarios describes six scenarios which are considered to be the relevant cases for DCS1800. The six scenarios described are:

- Single MS - Single BTS.
- Multiple MSs - Multiple co-ordinated BTSs.