IEC 62553

Edition 1.0 2012-11

INTERNATIONAL STANDARD

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Methods of measurement for digital network – Performance characteristics of terrestrial digital multimedia transmission network

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRICE CODE XA

ICS 33.170

ISBN 978-2-83220-502-0

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

METHODS OF MEASUREMENT FOR DIGITAL NETWORK –

Performance characteristics of terrestrial digital multimedia transmission network

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International Standard IEC 62553 has been prepared by subcommittee IEC technical committee 103: Transmitting equipment for radiocommunication.

The text of this standard is based on the following documents:

CDV	Report on voting
103/89/CDV	103/106/RVC

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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METHODS OF MEASUREMENT FOR DIGITAL NETWORK –

Performance characteristics of terrestrial digital multimedia transmission network

1 Scope

When a transmission network for digital terrestrial television broadcasting (DTTB) is being deployed, new networking technologies such as the Single Frequency Network (SFN) can be employed excelling the conventional analogue TV systems. However, new technical evaluation parameters are introduced for installing SFN systems. In addition new quality evaluation methods are also established in order to achieve stable and high-quality broadcasting services avoiding the cliff effect, which is one of the typical phenomena in the digital transmission that the signal quality is abruptly degraded when the received C/N becomes just lower than a specific value representing the system limit.

Given the background described above, this International Standard has the purposes of

- establishing measuring methods that enable the objective evaluation of the performance of transmission networks so as to make stable DTTB services a reality,
- establishing a technical baseline, such as a definition of technical terms, to standardize measuring methods.

The measurement methods described in this standard are intended for digital terrestrial television transmission network test and validation. The measurement methods for digital terrestrial transmitter are not included in this standard. These methods are described in IEC 62273-1.

This standard does not give any regulations and/or mandatory requirements. The specifications and requirements defined for each system have priority over this standard. However, there may be some cases where details are not specified in each individual specification or different systems should be evaluated under a common measurement method. The purpose of this standard is to provide a common technical baseline that makes measurement results comparable in all cases.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62273-1:2007, *Methods of measurement for radio transmitters – Performance characteristics of terrestrial digital televisiont transmitters*

ISO/IEC 13818-1:2007, *Information technology – Generic coding of moving pictures and associated audio information: Systems*

Amendments 1 to 6

TR 101 190*, Digital video broadcasting (DVB); implementation guidelines for DVB Terrestrial services;Transmission aspects*

TS 101 191, *Digital video broadcasting (DVB); DVB mega-frame for Single Frequency Network (SFN) synchronization*

TR 102 377, *Digital Video Broadcasting (DVB); DVB-H Implementation Guidelines*

ARIB STD-B31, *Transmission system for digital terrestrial television broadcasting*