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INTERNATIONAL STANDARD



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

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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CONTENTS

FOREWORD.....	5
1 Scope.....	7
2 Normative references	7
3 Terms and abbreviations	8
4 General conditions of measurement	9
4.1 Definitions and classifications of digital terrestrial TV transmission network	9
4.1.1 General	9
4.1.2 Network classification for transmitting frequencies.....	10
4.1.3 Network classification on useable contribution links for signal transport system between stations	11
4.2 Signal form.....	11
4.2.1 TS signal form	11
4.2.2 IF signal form	11
4.3 Test signals and auxiliary signals for measurement.....	11
4.3.1 Test signals.....	11
4.3.2 Auxiliary signals for measurement	12
5 Methods of measurement for signal delay time	12
5.1 Scope.....	12
5.2 Definition of signal delay time.....	13
5.2.1 Delay time	13
5.2.2 Relative delay time difference.....	13
5.3 Direct/indirect measurement.....	13
5.3.1 General	13
5.3.2 Direct measurement system	14
5.3.3 Indirect measurement system	14
5.4 Measurement place	14
5.5 Classification of measurement system.....	15
6 Methods of measurement for performances of radio wave relay station	17
6.1 Scope.....	17
6.2 Measurement diagram and measurement items.....	17
6.2.1 General	17
6.2.2 Measurement diagram	17
6.2.3 Measurement items	18
6.3 Methods of measurement	18
6.3.1 General	18
6.3.2 BER (case 2).....	19
6.3.3 Equivalent noise degradation (END).....	20
6.3.4 Amplitude frequency characteristics	21
6.3.5 Delay profile	22
6.3.6 Phase jitter	22
7 Methods of measurement for performances of signal quality improvement instrument used in radio wave relay station	24
7.1 General	24
7.2 Classification of signal quality improvement instrument	25
7.3 Measurement diagram and measurement condition	25
7.4 Common measurement items	25

7.5 Methods of measurement for each kind of compensator	26
Annex A (informative) Examples of measurement methods for signal delay	27
Annex B (informative) Examples of measurement methods for signal quality of relay stations	38
Annex C (normative) Principle and methods of measurement of compensators	45
Figure 1 – Example of transmission network	10
Figure 2 – Delay time and relative delay time difference definitions	13
Figure 3 – Direct and indirect measurement method	14
Figure 4 – Measurement diagram of received signal of relay station (case a)).....	17
Figure 5 – Measurement diagram of relay station (case b)).....	17
Figure 6 – BER- Measurement method	20
Figure 7 – Definition of END	21
Figure 8 – Measurement diagram of amplitude-frequency characteristics.....	22
Figure 9 – Measurement block diagram of delay profile	22
Figure 10 – Reference model.....	23
Figure 11 – Conceptual diagram of relay station using a compensator	25
Figure A.1 – General measurement system for cases 1 to 3	27
Figure A.2 – Example of frame sync signal extracting part	28
Figure A.3 – Example of OFDM demodulator for frame timing extraction.....	29
Figure A.4 – Block diagram of direct measurement methods for time delay of OFDM signal.....	30
Figure A.5 – Example of frequency characteristics of combined signal.....	31
Figure A.6 – Example of delay profile of combined signal	31
Figure A.7 – General measurement system for cases 5,6,13 and 14	32
Figure A.8 – Timing chart for signal delay measurement.....	32
Figure A.9 – Principle of measurement using 1 pps signal	33
Figure A.10 – General measurement system for cases 7, 8 and 15,16	34
Figure A.11 – Measurement system for delay time (time reference is 1pps signal of GPS)	35
Figure A.12 – Timing relation of each signals.....	36
Figure A.13 – Delay profile of OFDM signal	37
Figure B.1 – BER measurement conceptual diagram for Null Packet method	39
Figure B.2 – Examples of measurement result by Null Packet method	39
Figure B.3 – Method to compare the data before/after correction	40
Figure B.4 – Superimposed C/N measurement system.....	41
Figure B.5 – Inherent degradation of OFDM demodulator measurement system	43
Figure B.6 – Calculation process of delay profile	44
Figure C.1 – Example of measurement block diagram for performances of loop-back canceller.....	46
Figure C.2 – Example of measurement block diagram for performances of diversity reception equipment	48
Figure C.3 – Example of measurement block diagram for performances of co-channel interference canceller	50

Figure C.4 – Example of measurement block diagram for performances of C/N Reset equipment.....	52
Table 1 – Classification of contribution link	11
Table 2 – Parameter set of OFDM signal for test in ISDB-T system.....	11
Table 3 – Parameter set of OFDM signal for test in DVB-T/H system	12
Table 4 – Combination of signal type	13
Table 5 – Classification of measurement system for signal delay time	16
Table 6 – An example of measurement items for Relay station	18
Table 7 – Example of the parameter set of spectrum analyzer	22
Table 8 – Compensators used in digital terrestrial broadcasting relay network.....	25
Table 9 – Examples of measurement items for signal quality improvement instrument	26
Table A.1 – Signal format and timing extraction of each case	27
Table A.2 – Equipment list for measurement.....	30
Table A.3 – Equipment list for delay time measurement.....	35
Table B.1 – Definition of Null Packet (in case of ISDB-T).....	38
Table B.2 – Example of noise power measurement parameters (6 MHz ISDB-T).....	42
Table B.3 – Example of signal power measurement parameters (6 MHz ISDB-T).....	42

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 television 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*