



SLOVENSKI STANDARD
SIST EN 50346:2003/A1:2008

01-maj-2008

Informacijska tehnologija - Polaganje kablov - Preskušanje inštaliranih kablov

Information technology - Cabling installation - Testing of installed cabling

Informationstechnik - Installation von Kommunikationsverkabelung - Prüfen installierter Verkabelung

Technologies de l'information - Installation de câblage - Essai des câblages installés

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Ta slovenski standard je istoveten z: EN 50346:2002/A1:2007

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ICS:

35.110 Omreževanje Networking

SIST EN 50346:2003/A1:2008 **en,fr,de**

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English version

**Information technology -
Cabling installation -
Testing of installed cabling**

Technologies de l'information -
Installation de câblage -
Essai des câblages installés

Informationstechnik -
Installation von
Kommunikationsverkabelung -
Prüfen installierter Verkabelung

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This amendment A1 modifies the European Standard EN 50346:2002; it was approved by CENELEC on 2007-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This amendment to the European Standard EN 50346:2002 was prepared by the Technical Committee CENELEC TC 215, Electrotechnical aspects of telecommunication equipment.

The text of the draft was submitted to the formal vote and was approved by CENELEC as amendment A1 to EN 50346:2002 on 2007-10-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2008-10-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2010-10-01

This amendment has been prepared to reflect optical fibre cabling testing as specified in ISO/IEC 14763-3; furthermore, it introduces an XML schema to ease the exchange and further processing of data captured by field test equipment. As an integral element of this standard, an electronic version of the XML schema is provided in the format of an XSD file.

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Introduction of EN 50346:2002

Amend 1st indent following paragraph 2 to read: “- for design - EN 50173 series and ...”.

Clause 2

Delete references to EN 61280-4-2, EN 61000-3-4 and EN 61300-3-6.

Add at the end of Clause 2: “ISO/IEC 14763-3, Information technology – Implementation and operation of customer premises cabling – Part 3: Testing of optical fibre cabling”.

Subclause 4.1.4

Replace 4.1.4 (including Figure 3) **by** the following:

4.1.4 Reference planes for point-to-point cabling

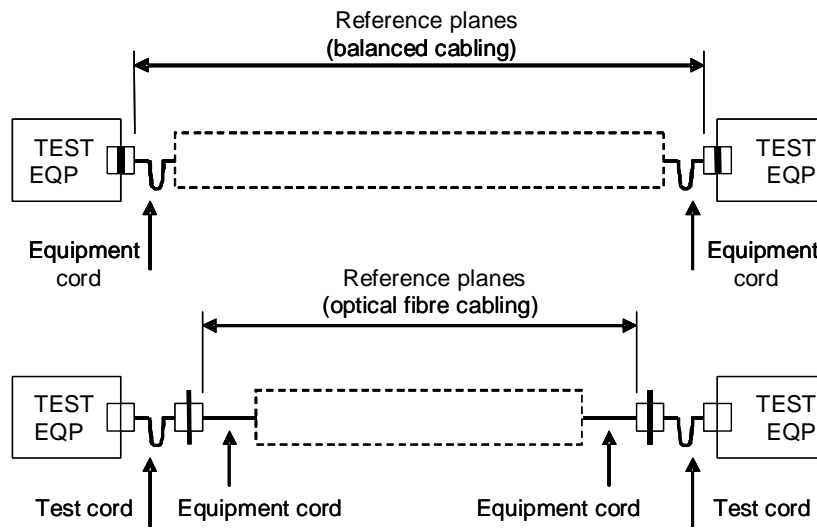
4.1.4.1 Balanced cabling

The accuracy of the test system is defined at its reference planes. The test configuration reference plane at each end of a channel is within the equipment cord next to the connection of the equipment cord into the test equipment (see Figure 3). The test configuration reference plane of a link is within the test cord next to the test cord connection which mates to the termination point of the link under test (see Figure 3).

4.1.4.2 Optical fibre cabling

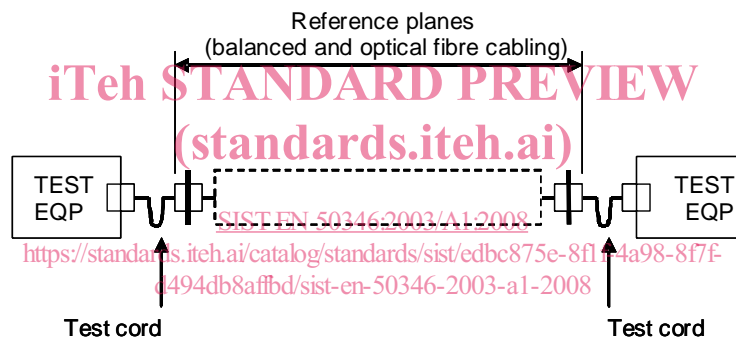
The accuracy of the test system is defined at its reference planes. The test configuration reference plane at each end of a channel is within the equipment cord next to the connection of the equipment cord into the test cord (see Figure 3). The test configuration reference plane of a link is within the test cord next to the test cord connection which mates to the termination point of the link under test (see Figure 3).

a) Channel reference planes



NOTE The dotted area contains cables and may contain additional connections and splices/joints.

b) Link reference planes



NOTE The dotted area contains cables and may contain connections and splices/joints.

Figure 3 – Reference planes for links and channels (point-to-point)

Subclause 4.7

Add at the end of 4.7:

Where compliance with a specific value is required the measured result shall be termed a pass, a fail or a marginal result.

Clause 6

Replace Clause 6 by the following text and **update** the list of tables in Contents:

6 Test parameters for optical fibre cabling

6.1 General requirements

This standard applies the requirements of the test methods specified by ISO/IEC 14763-3 to information technology cabling within the scope of this standard subject to the following:

- a) the results shall be compared with relevant limits specified in EN 50173-1 or the applicable application-specific standard;
- b) the additional requirements of this clause shall be applied.

6.2 Channel and link attenuation

6.2.1 Treatment of measured results

6.2.2.1 All-silica optical fibre cabling terminated with connecting hardware having transmission performance specified in EN 50173-1

See ISO/IEC 14763-3.

6.2.2.2 All-silica optical fibre cabling terminated with connecting hardware having transmission performance other than that specified in EN 50173-1

The calculation of limits and measurement uncertainty shall take into account the performance of reference and non-reference connectors provided within the relevant connector standards or manufacturers'/suppliers' information. [SIST EN 50346:2003/A1:2008](https://standards.iteh.ai/catalog/standards/sist/en-50346-2003-a1-2008)

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6.2.2.3 Other optical fibre cabling

The calculation of limits and measurement uncertainty shall take into account the performance of reference and non-reference connectors provided within the relevant connector standards or manufacturers'/suppliers' information.

6.3 Inter-component distance

This standard extends the methods of ISO/IEC 14763-3 used to measure channel and link length to determine inter-component distances.

Insert a new Clause 7

7 Inspection of optical fibre cabling and installed cabling components

This standard applies the requirements of ISO/IEC 14763-3 to the information technology cabling covered by this standard.

Annex A

Replace Annex A by the following text and update the list of figures and tables in Contents:

Annex A (informative)

XML Schema for portable field test equipment

A.1 General

Many types of portable field test equipment use proprietary software in order to view the results obtained. This annex does not seek to replace such software. However, it may be desirable to view results from a variety of test equipment using a common platform. Examples of such situations are where:

- a) test results from different types of portable field test equipment are to be collated within a single "database" for the purposes of review and assessment;
- b) test results from one or more types of portable field test equipment are to be incorporated within third party software documentation systems.

It has been common for test result data to be exported as text files (e.g. csv files). However, the level of integration as described above from a range of text files has required significant additional data management. In order to reduce the need for additional data treatment and to reflect the growth of web-based solutions, the most applicable common platform is one that can be viewed with standardised browser technology.

XML, a recognised data format specified by W3C (www.w3.org/XML/), is the most appropriate data management solution. This annex defines the minimum data set and the applicable field names, in the form of XML schema, for the export of data from the proprietary software used by suppliers of portable field test equipment, or the test equipment itself, when testing cabling installed in accordance with EN 50174 series of standards against the requirements of the applicable cabling application standard (e.g. EN 50173-1).

Using the appropriate schema, the data format from a specific test result can be verified, prior to further data formatting that allows the data to be viewed as HTML files, PDF files or by other XML files.

A.2 XML Schema

The XML file format allows structured data to be exchanged between applications, see Figure A.1.

An XSD file contains a set of rules that define the structure of an XML file. This annex describes an XSD file (also available electronically) that describes the structure of the XML file format.

An XSLT file can be used to transform a XML file into another format. This is typically used to convert the XML data into HTML so it can be viewed in a web browser.

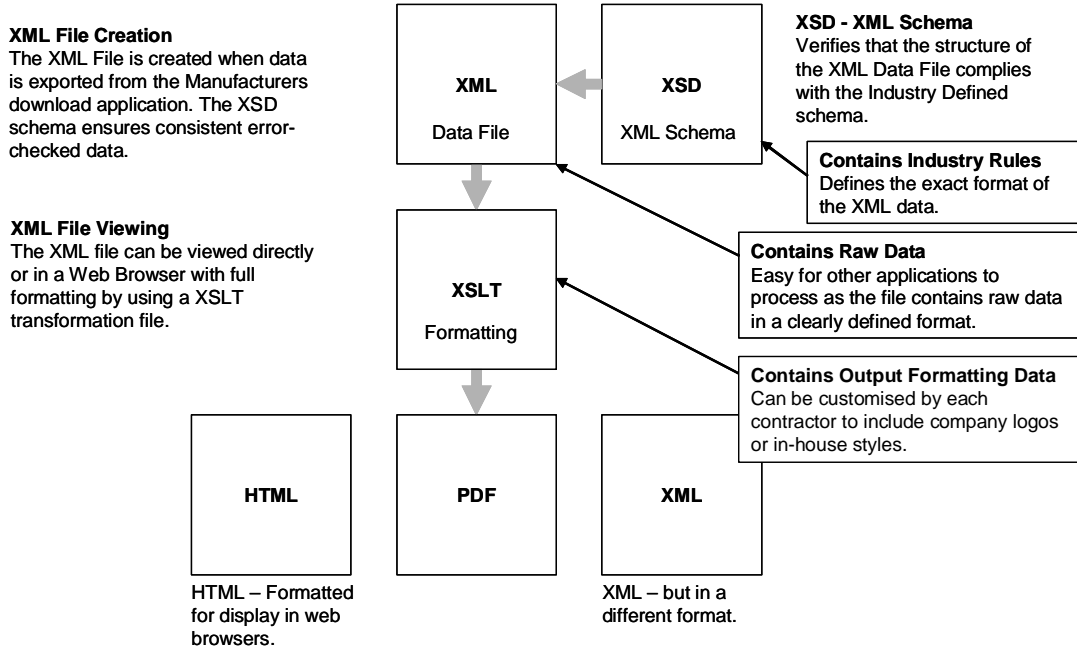


Figure A.1 – Example of XML implementation

A.3 Data security

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Unless appropriate steps are taken, the conversion of data from the native formats used by the suppliers of portable field test equipment renders the data subject to subsequent modification. Appropriate third party software such as “XML Signature” may be used to address the issue of data security. This is outside the scope of this standard.

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A.4 XML Schema – Test result envelope

Figure A.2 shows the overall schema design for the XML data format to be used to export test results for all balanced and optical fibre cabling.

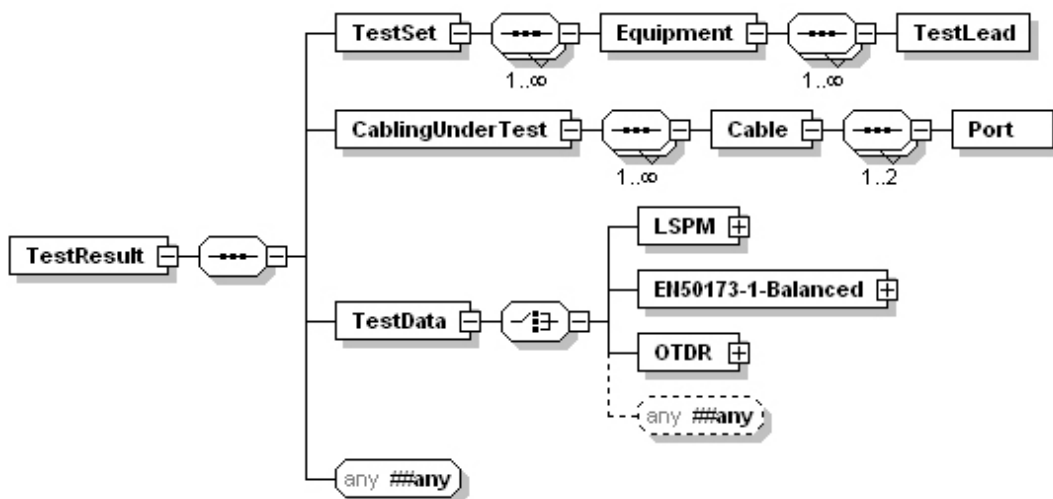


Figure A.2 – Overall schema design for XML data format for EN 50346 test result export

Further details of the elements shown in Figure A.2 are given in Table A.1 to Table A.8.

Table A.1 – Element TestResult

Element	TestResult				
Schematic relationship					
Children	TestSet CablingUnderTest TestData				
Name	Type	Use	Default	Fixed	Annotation
CreatedBy ^a	xs:string	required			<p>A file containing a single test result. Each file should be saved with a unique name.</p> <p>The following format is recommended: {Manufacturer}-{Tester Serial No}-{unique sequence number}.xml.</p>
CreatedByVersion ^b	xs:string	required			
CreatedAt ^c	xs:dateTime	required			
SchemaVersion	xs:string	required			
CompanyName ^d	xs:string	optional	http://standards.iteh.ai/catalog/standards/sist/edbc875e-8ff-f4a98-817f-d494db8a11hd/sist-en-50346-2003-a1-2008		
OperatorName ^e	xs:string	optional			
^a The name of the software that generated this file. ^b The version number of the software that generated this file. ^c The time and date that this file was generated (not the test time). ^d The name of the company performing the test. ^e The name of the person performing the test.					

Table A.2 – Element TestResult/TestSet

Element	TestResult/TestSet				
Schematic relationship					
Children	Equipment				
Name	Type	Use	Default	Fixed	Annotation
					<p>A description of each item of equipment used to perform the test.</p>

Table A.3 – Element TestResult/TestSet/Equipment

Element	TestResult/TestSet/Equipment				
Schematic relationship					
Children	TestLead				
Name	Type	Use	Default	Fixed	Annotation A description of the equipment that was used to perform the test.
Manufacturer ^a	xs:string	required			
ModelNo ^b	xs:string	required			
SerialNo ^c	xs:string	required			
Description ^d	xs:string	required			
SoftwareVersion ^e	xs:string	required			
CalibratedDate ^f	xs:string	optional			
CalibratedUntilDate ^g	xs:string	optional			
^a The manufacturer of the tester. ^b The model number of the tester. ^c The serial number of the tester. ^d A description of the equipment e.g. "Main Unit" or "Remote Unit". ^e The version of software running on the tester. ^f The date the unit was last calibrated. ^g The date the unit is calibrated until.					

Table A.4 – Element TestResult/TestSet/Equipment/TestLead

Element	TestResult/TestSet/Equipment/TestLead				
Schematic relationship					
Children					
Name	Type	Use	Default	Fixed	Annotation A description of the test lead that was used to perform the test.
LeadType ^a	xs:string	optional			
SerialNo ^b	xs:string	optional			
UseCount ^c	xs:int	optional			
LeadLength ^d	xs:string	optional			
^a A description of the test lead used to perform the test. ^b The serial number of the test lead. ^c A value indicating the number of times the lead has been used. ^d The length of the lead, particularly for fibre launch leads.					