

TECHNICAL  
REPORT

ISO/IEC  
TR 14763-2

First edition  
2000-07

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**Information technology –  
Implementation and operation of customer  
premises cabling –  
Part 2:  
Planning and installation**

Document Preview

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# INFORMATION TECHNOLOGY – IMPLEMENTATION AND OPERATION OF CUSTOMER PREMISES CABLING –

## Part 2: Planning and installation

### FOREWORD

- 1) ISO (International Organization for Standardization) and IEC (International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.
- 2) In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.
- 3) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

The main task of IEC and ISO technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a technical report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where, for any other reason, there is the future but not immediate possibility of an agreement on an International Standard;
- type 3, when the technical committee has collected data of a different kind from that which is normally published as an International Standard, for example 'state of the art'.

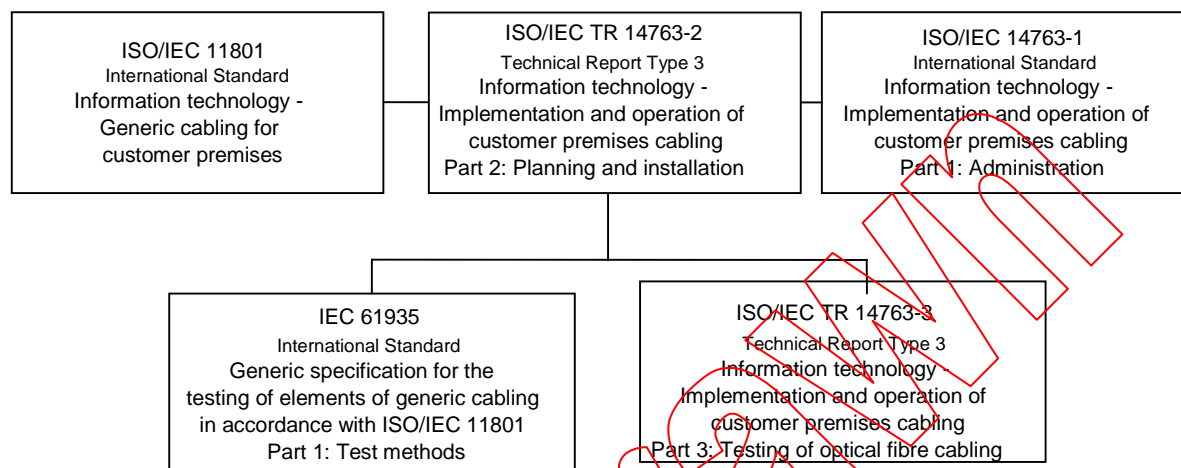
Technical reports of types 1 and 2 are subject to review within three years of publication to decide whether they can be transformed into International Standards. Technical reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/IEC 14763-2, which is a technical report of type 3, was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This document is not to be regarded as an International Standard. Comments on the content of this document should be sent to the IEC Central Office.

## INTRODUCTION

This Technical Report is one of two prepared in support of international standard ISO/IEC 11801. The diagram below shows the inter-relationship of the currently developed Technical Reports and other supporting standards.



**Figure 1 – Document relationships**

This document forms Part 2 of ISO/IEC 14763 (Technical Report, type 3) and highlights issues relevant to planning and installing generic cabling which has been designed in accordance with ISO/IEC 11801.

Administration procedures relevant to generic cabling within customer premises are detailed in ISO/IEC 14763-1.

The test procedures to be applied to the cabling, during and after installation, are detailed in ISO/IEC 14763-3 for optical fibre cabling and IEC 61935-1 for balanced copper cabling.

Users of this document should be familiar with ISO/IEC 11801.

Additional information regarding the use of centralised optical fibre cabling is included in annex A.

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# INFORMATION TECHNOLOGY –

## Implementation and operation of customer premises cabling –

### Part 2: Planning and installation

## 1 Scope

This Technical Report specifies requirements and provides general considerations for the planning, specification, quality assurance and installation of new cabling in accordance with ISO/IEC 11801.

## 2 Reference documents

This document contains dated or undated references to specifications from other publications. These references are quoted at the relevant points in the text and the publications are listed below. In the case of dated references, subsequent changes or revisions to these publications belong to this standard only if they have been incorporated by change or revision. In the case of undated references, the latest edition of the relevant publications is applicable in each case.

IEC 60793 (all parts), *Optical fibres*

IEC 60794 (all parts), *Optical fibre cables*

IEC 61156 (all parts), *Multicore and symmetrical pair/quad cables for digital communications*

IEC 61935-1,— *Generic cabling systems – Specification for the testing of balanced communication cabling in accordance with ISO/IEC 11801 – Part 1: Installed cabling*<sup>1)</sup>

ISO/IEC 11801, *Information technology – Generic Cabling for Customer Premises*

ISO/IEC 14763-1, *Information technology – Implementation and Operation of Customer Premises Cabling – Part 1: Administration*

ISO/IEC TR 14763-3, *Information technology – Implementation and Operation of Customer Premises Cabling – Part 3: Testing of optical fibre cabling*

## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of this part of ISO/IEC 14763 the following definitions apply in addition to those of ISO/IEC 11801 and ISO/IEC 14763-1.

#### 3.1.1

##### **balun**

a device for transforming an unbalanced voltage to a balanced voltage or vice-versa

#### 3.1.2

##### **bonding**

the process of connecting the earthing conductors/contacts on cabling, pathway systems or components to an identified earthing point within the premises as specified in national or local regulations

<sup>1)</sup> To be published.

NOTE Equipotential bonding is defined as “provision of electric connections between conductive parts, intended to achieve equipotentiality”.

### 3.1.3

#### **cabinet**

an enclosed construction intended for housing telecommunication components and equipment

### 3.1.4

#### **civil works**

activities required to prepare pathways and pathway systems, particularly external to buildings, prior to the installation of cabling

### 3.1.5

#### **closure**

fixture or fitting of either open or closed construction intended to contain connecting hardware

### 3.1.6

#### **frame**

an open construction intended for mounting telecommunications components and equipment

### 3.1.7

#### **impedance matching device**

a device designed to match the impedance of transmission equipment to that of the installed cabling

### 3.1.8

#### **minimum dynamic bend radius**

the minimum allowable radius a cable may be bent during installation

### 3.1.9

#### **minimum static bend radius**

the minimum allowable radius a cable may be bent in its operating position

### 3.1.10

#### **pathway system**

areas or volumes defined by markings or fittings within pathways intended for the containment of installed cables

### 3.1.11

#### **Stage 1**

a possible contractual boundary following the installation of cable but prior to its termination at which testing may be appropriate (certain systems allow the installation of pre-terminated cables which may be subject to Stage 1 testing)

### 3.1.12

#### **Stage 2**

a possible contractual boundary following the completion of cabling installation at which testing may be appropriate

## 3.2 Abbreviations

This document uses the abbreviations of ISO/IEC 11801 and ISO/IEC 14763-1.

## 4 Safety

The specification of safety requirements is beyond the scope of this Technical Report. It is referred to those safety standards and regulations applicable at the location of the installation.

## 5 Planning

### 5.1 General

This clause details the recommended approach to be taken during the planning phase, prior to the development of an Installation Specification (see clause 6).

### 5.2 Distributors, Transition Points and Telecommunications Outlets

#### 5.2.1 General

The functional elements of generic customer premises cabling as defined within ISO/IEC 11801 are the Distributors (Campus, Building and Floor), the Transition Point (optional) and the Telecommunications Outlets together with the cables used to interconnect them (see clause 5 of ISO/IEC 11801).

The requirements for the relative positioning of the Distributors and the Telecommunications Outlets and the performance of the cabling sub-systems are detailed in clauses 6 and 7 of ISO/IEC 11801.

#### 5.2.2 Distributors

##### 5.2.2.1 Environmental protection

Distributors are located within areas designated as Equipment Rooms or Telecommunications Closets. The Equipment Rooms and Telecommunications Closets (and cabinets or other closures within them) should provide physical and environmental protection for the distributors.

This protection may be achieved either by choice of appropriate location or by specific design features and should address the following aspects:

- a) temperature;
- b) humidity;
- c) vibration;
- d) exposure to ultraviolet radiation
- e) ingress of dust, fluids (including flooding) or other contaminants;
- f) chemical attack;
- g) physical damage (accidental or malicious);
- h) security;
- i) presence of hazards;
- j) electromagnetic interference.