

INTERNATIONAL STANDARD

ISO/IEC 14763-1

First edition
1999-10

**Information technology –
Implementation and operation of
customer premises cabling –**

**Part 1:
Administration**

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INFORMATION TECHNOLOGY – IMPLEMENTATION AND OPERATION OF CUSTOMER PREMISES CABLING –

Part 1: Administration

FOREWORD

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialised system for world-wide standardisation. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organisation to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organisations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

International Standard ISO/IEC 14763-1 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

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ISO/IEC 14763 consists of the following parts, under the general title Information technology – Implementation and operation of customer premises cabling:

Part 1: Administration

Part 2: Planning and installation

Part 3: Testing of optical fibre cabling.

Annexes A, B, C and D are for information only.

INTRODUCTION

To utilise the wide variety of modern telecommunications services requires an effective telecommunications infrastructure. Cabling is a component of this infrastructure. It is needed to transport information, in the form of electrical and optical signals, between equipment. An effective cabling system is one that is properly installed, maintained and updated. In order to maintain and update a cabling system, in an efficient manner, an adequate administration system is required (see Figure 1).

An administration system consists of records that document the location of all telecommunications components and the unique identifiers that have been assigned to those components (see 4.4). It details the procedures for assigning identifiers to the components and placing labels on the components. The administration system provides a structure wherein additions, changes and deletions can be easily incorporated into the administration documentation.

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INFORMATION TECHNOLOGY – IMPLEMENTATION AND OPERATION OF CUSTOMER PREMISES CABLING –

Part 1: Administration

1 Scope

This International Standard identifies fundamental principles such that individuals and organisations that own, or are responsible for a telecommunications infrastructure can, by use of this document, develop an administration system that is suitable to their needs. This International Standard does not recommend a specific type of administration system.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 14763. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO/IEC 14763 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO/IEC 11801:1995, *Information technology – Generic Cabling for Customer Premises*

<https://standards.iteh.ai/catalog/standards/sist/abb05408-1ce7-4987-8cc5-76cc074d978b/iec-14763-1-1999>
IEC 61082-1:1991, *Preparation of documents used in electrotechnology – Part 1: General requirements*

IEC 61082-2:1993, *Preparation of documents used in electrotechnology – Part 2: Function-oriented diagrams*

IEC 61082-3:1993, *Preparation of documents used in electrotechnology – Part 3: Connection diagrams, tables and lists*

IEC 60617 (series), *Graphical symbols for diagrams*

IEC 61930:1998, *Fibre optic graphical symbology*

IEC 61931:1998, *Fibre optic – Terminology*

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this standard the definitions of ISO/IEC 11801 apply in addition to the following ones:

3.1.1

identifier (of component in the information technology infrastructure)

a unique item of information that enables a specific component of the information technology infrastructure to be differentiated in the administration records

3.1.2

label

a label is used to clearly mark a specific component of the information technology infrastructure with its identifier and (optionally) other information

3.1.3

pathway

cable route (e.g., conduit, ductwork, tray, or tube) used to accommodate cables between termination points defined by a physical structure

3.1.4

record

collection of information about or related to a specific element of the information technology infrastructure

3.1.5

space

area (e.g., closet, cabinet, manhole, or equipment room) used to house cable terminations or equipment

3.1.6

work order

collection of information which documents the changes requested and the operations to be carried out on the information technology infrastructure

3.2 Abbreviations

CAD	Computer Aided Design
HVAC	Heating, Ventilation, Air conditioning
PABX	Private Automatic Branch Exchange

4 Cabling administration

4.1 General

Cabling administration is a system for managing cabling and connections. The administration system enables the components of the cabling to be identified in terms of their type, location, usage and other criteria.

The administration system may use a data base of records to maintain up-to-date information relating to the cabling. It enables the user to keep control of moves, additions and changes to the cabling and to generate reports on the state of the cabling system. Figure 1 gives an overview of criteria for administration, necessary identifiers, records and examples of linkages. The relevant cabling standards are shown in an informative flow diagram of annex D.

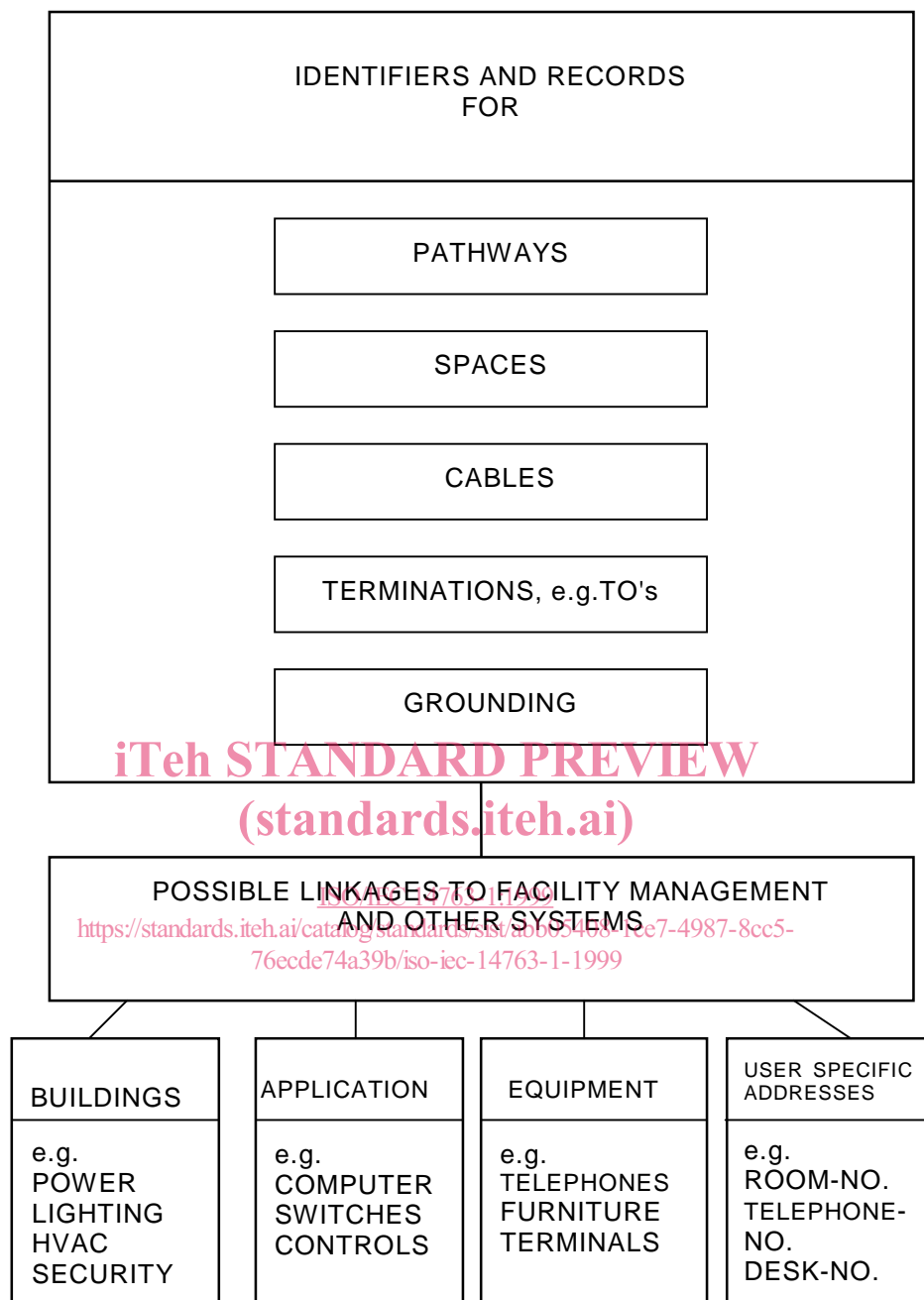


Figure 1 – Components to be identified and recorded

4.2 Database

It is recommended that the principles of administration outlined in this clause be implemented using a computer based administration system. For smaller, less complex systems, a well designed paper based administration system may be adequate (see figure 2 and annex B). The complexity of the administration system may be related to the size of the telecommunications infrastructure. For a small system, a customised commercial database programme may be adequate. For a large organisation, the cabling administration system may require a sophisticated database, an efficient data retrieval program and additional features. For example, the computer administration package may input drawings directly from CAD programs or may output reports to external packages or e-mail work orders and automatically update records on completion of work and may also serve as a cabling design tool.

The basic administration database information flow is illustrated by figure 2.

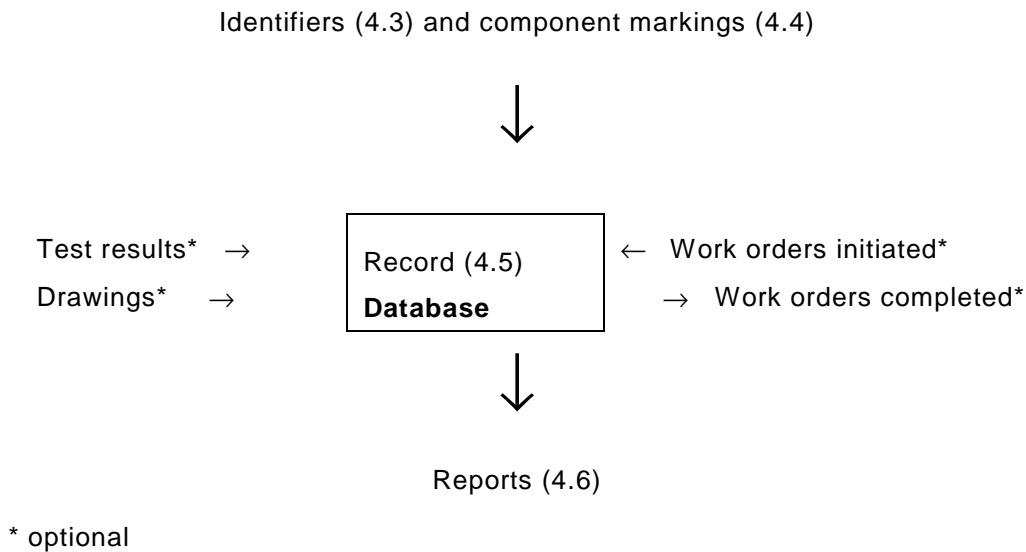


Figure 2 – Basic cabling administration

4.3 Identifiers

Every component related to cabling as well as pathways and spaces should have an identifier. As an example an identifier for a telecommunications outlet (TO) may be a single unique number. Alternatively an identifier may indicate through a code its location, type and other information (see annex A).

4.4 Component markings

Each component shall be clearly marked with its identifier. Marking may be achieved by securely attaching labels to the components or the component may be marked. Markings shall be permanent, accessible and readable.

4.5 Records

4.5.1 General

Records may be produced and maintained using a computer or paper based administration system.

Records regarding components of cabling, pathways and spaces should be linked to each other using their identifiers and may make reference to further premises records on power, heating, air conditioning systems, lighting, etc.

Records should include the date of installation and shall be updated whenever changes are made to cabling infrastructure.

4.5.2 Minimum records

The following minimum records regarding cabling infrastructure shall be provided:

- a) for cables: locations of end points, type, number, pairs;
- b) for outlets: identifier, type, location;
- c) for distributors: identifier, designation, type, location, connections;
- d) the floor plan including the locations of the outlets, distributors, pathways.

4.5.3 Optional records

When changes are made to the cabling infrastructure including pathways and spaces additional records may be necessary.

4.5.3.1 Cable records

- type of optical fibre or copper cable
- typical cable data (e.g. part number, sheath colour)
- sheath and core identification
- manufacturer
- number of unterminated conductors and those with failures
- length
- data such as attenuation and crosstalk
- identification of pin connections at both ends and of splices
- performance classification (if applicable)
- location of earthing
- treatment of screens
- transmission system under operation
- date code
- part number
- identifier
- linkage to identifiers for distributors, outlets, pathways and spaces

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4.5.3.2 Telecommunications outlet records

- performance classification (if applicable)
- single-mode or multimode fibre
- shielded or unshielded design
- manufacturer
- number and arrangement of terminated pins if not all pins are terminated
- part number
- identification of ports and cables connected
- linkage to identifiers for distributors, outlets, pathways and spaces

4.5.3.3 Distributor records

- number of available and used cables, fibres or pairs
- manufacturer
- number of conductors
- linkage to identifiers for cables, pathways and spaces
- part number
- front view of the patch cabinet