

INTERNATIONAL STANDARD

ISO/IEC 18010

2002

AMENDMENT 1
2005-12

Amendment 1

**Information technology –
Pathways and spaces
for customer premises cabling**

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For price, see current catalogue

FOREWORD

Amendment 1 to International Standard ISO/IEC 18010 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

Withdrawing

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Contents

Add the following new items in the table of contents:

Annex A (normative) Additional requirements for multi-tenant buildings

A.1 INTRODUCTION

A.2 Entrance facilities

A.2.1 Entrance location considerations

A.2.2 Telecommunications service entrance pathway

A.2.3 Access

A.2.4 Wireless

A.3 Access provider spaces and service provider spaces

A.3.1 General

A.3.2 Location

A.3.3 Pathways

A.3.4 Design

A.4 Common equipment room

A.4.1 General

A.4.2 Location

A.4.3 Pathways

A.4.4 Design

A.5 Common telecommunications room

A.5.1 General

A.5.2 Location

A.5.3 Pathways

A.5.4 Design

A.6 Building and campus pathway requirements

A.6.1 Building pathways

A.6.2 Campus pathways

Annex B (informative) Additional recommendations for multi-tenant buildings

Existing Annexes A and B have to be renumbered as Annexes C and D, as follows:

Annex C (informative) Pathways and cable stresses

Annex D (informative) Building entrance facility

General

Update the references to tables and figures whose numbers have been changed.

Page 5

INTRODUCTION

Add the following new paragraph:

This standard has 4 annexes:

Annex A (normative)	Additional requirements for multi-tenant buildings
Annex B (informative)	Additional recommendations for multi-tenant buildings
Annex C (informative)	Pathway and cable stresses
Annex D (informative)	Building entrance facility

Page 6

1 Scope

Replace the second paragraph by the following text:

This International Standard also influences space allocation within the building. Both single- and multi-tenant buildings for residential and commercial use are considered by this standard.

Page 7

3 Definitions and abbreviations

3.1 Definitions

Add the following new definitions after 3.1.9:

3.1.10

common equipment room (telecommunications)

enclosed space used for equipment and backbone interconnections for more than one tenant in a building

3.1.11

common telecommunications room

enclosed space used for backbone interconnections for more than one tenant in a building, which may also house equipment

Renumber the existing definitions 3.1.10 to 3.1.26 as 3.1.12 to 3.1.28.

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3.2 Abbreviations

Replace the existing text by the following:

CER	Common equipment room
CTR	Common telecommunications room
EMI	Electromagnetic interference
HVAC	Heating, ventilation and air conditioning
IT	Information technology

4 Conformance

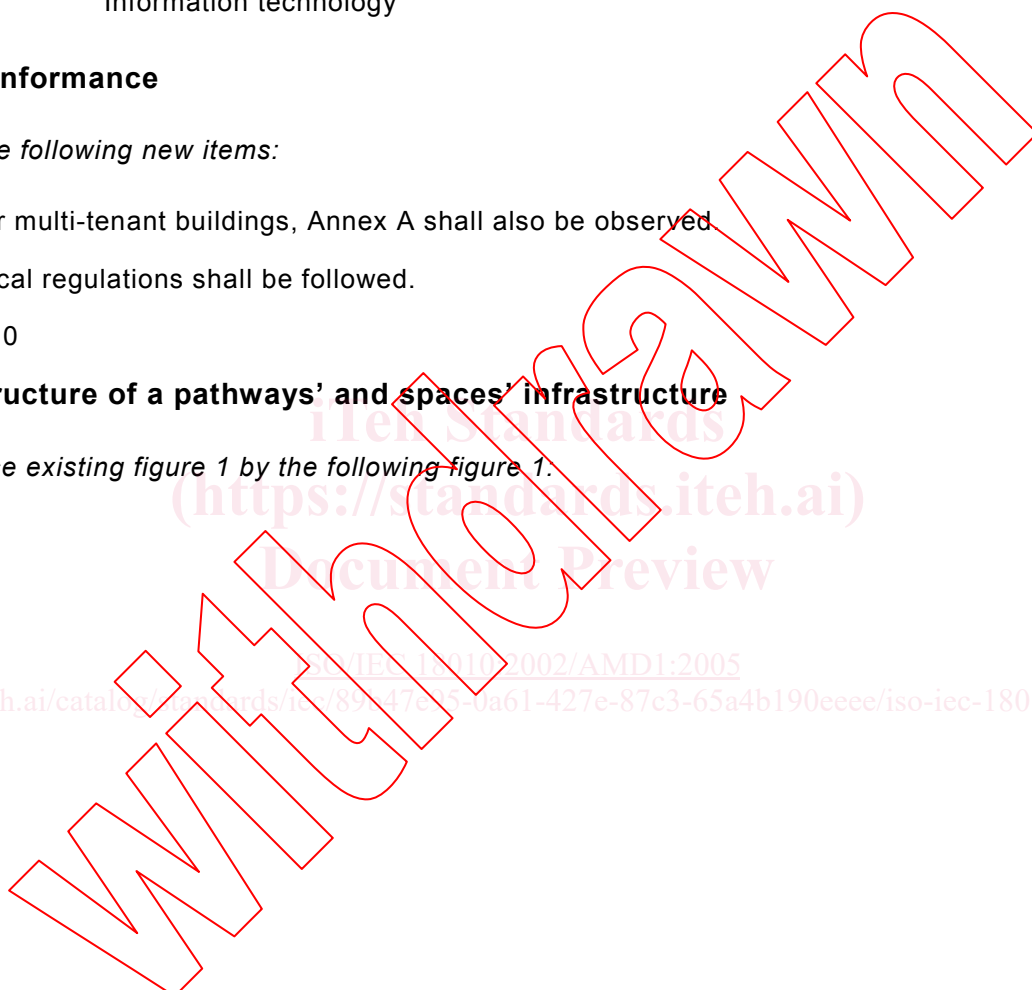
Add the following new items:

- c) For multi-tenant buildings, Annex A shall also be observed.
- d) Local regulations shall be followed.

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5 Structure of a pathways' and spaces' infrastructure

Replace existing figure 1 by the following figure 1.



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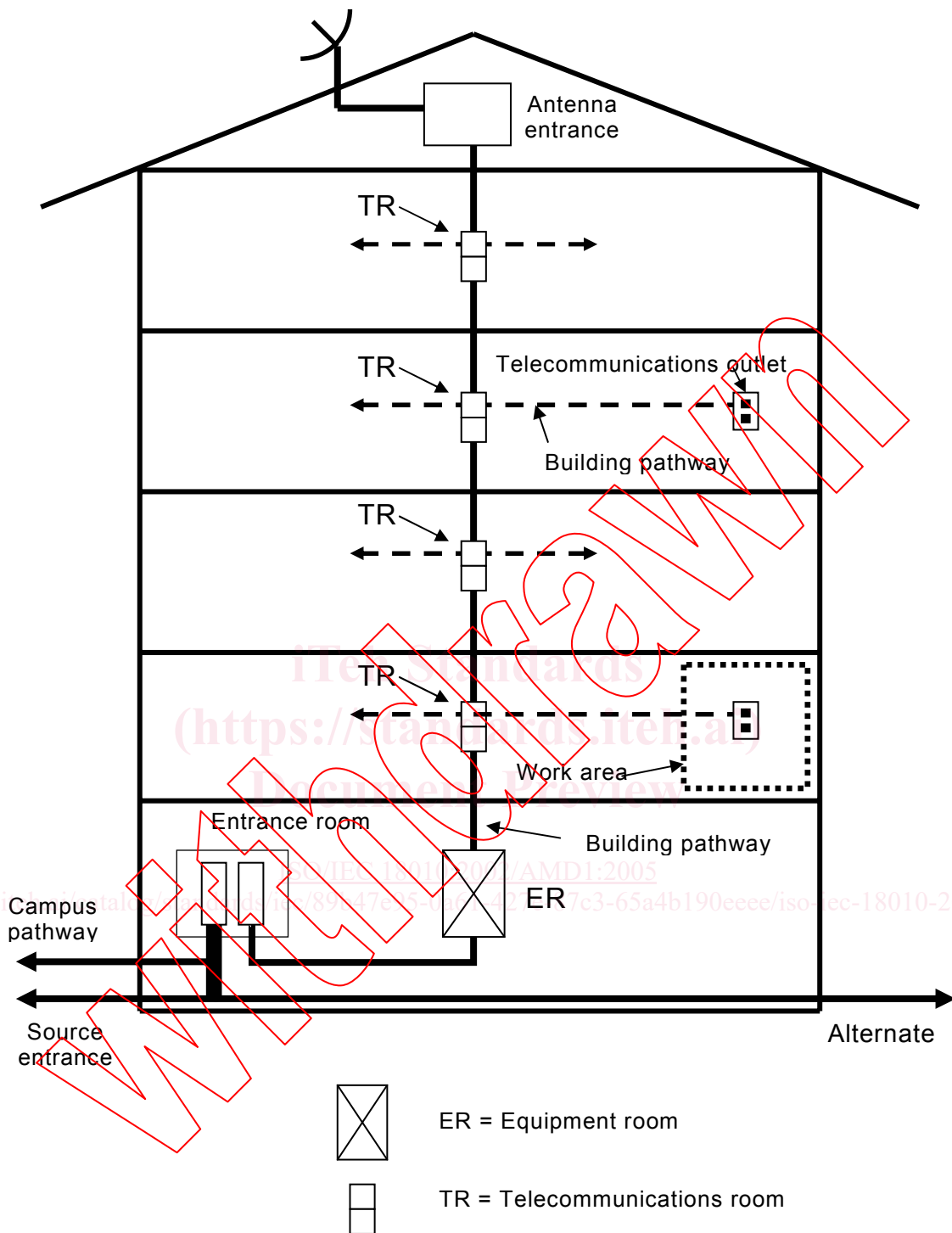


Figure 1 – Basic elements of a pathways' and spaces' infrastructure

6.3 Telecommunications room

Add the following new paragraph before the last paragraph:

Telecommunications room temperature and humidity shall provide for continuous operation of the installed active equipment. Humidifying and dehumidifying equipment may be required depending upon local environmental conditions.

6.4 Equipment room

Add, on page 12, the following paragraph after the fifth paragraph:

Equipment room temperature and humidity shall provide for continuous operation of the installed active equipment. Humidifying and dehumidifying equipment may be required depending upon local environmental conditions.

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6.5 Main terminal space

Add an new subclause 6.6 after 6.5.

6.6 Home distributor (HD)

The HD shall be able to contain telecommunications equipment, cable terminations and associated cross-connect cables.

The HD should be located as close as practicable to the centre of the area served and preferably in the core area.

The HD space shall be dedicated to the HD function and related support facilities. HD space should not be shared with electrical installations other than those for telecommunications.

A minimum of one dedicated electrical outlet shall be provided for equipment power.

NOTE Local regulations should be followed for electrical power distribution.

Renumber existing subclauses 6.6 to 6.9 as 6.7 to 6.10.

Page 20

8.8 Handholes

Add, after the end of subclause 8.8, the following two new annexes A and B and renumber existing annex A and annex B as annex C and annex D, respectively.

Annex A (normative)

Additional requirements for multi-tenant buildings

A.1 INTRODUCTION

Annexes A and B focus on the pathways and spaces that are common to multi-tenant buildings and campuses.

Telecommunications pathways and spaces in multi-tenant buildings are challenged by the phased nature of their use. After the building is constructed and the first group of tenants moves in, the tenant's telecommunications needs may immediately cause modifications to the building. Over a span of years, as tenants cycle through the building, evolving tenant needs will oblige the owner/agent of the building to adapt its installations to these demands.

Multi-tenant commercial office and residential buildings have life cycles that mirror that of single-tenant buildings. Many buildings are over 100 years old. Over time, these older buildings have become severely challenged to support escalating demands on their pathways and spaces as a result of tenants' ever-increasing needs for telecommunications connectivity.

Figure A.1 illustrates a representative model for the various functional elements that comprise multi-tenant pathways and spaces for a building. This is not intended to be an all-inclusive representation. It depicts the relationship between the elements and how they are configured to create a total system. Table A.1 provides a summary of the telecommunications spaces.

Elements of multi-tenant spaces include, but are not limited to,

- entrance room,
- access provider space,
- service provider space,
- common equipment room and
- common telecommunications room.

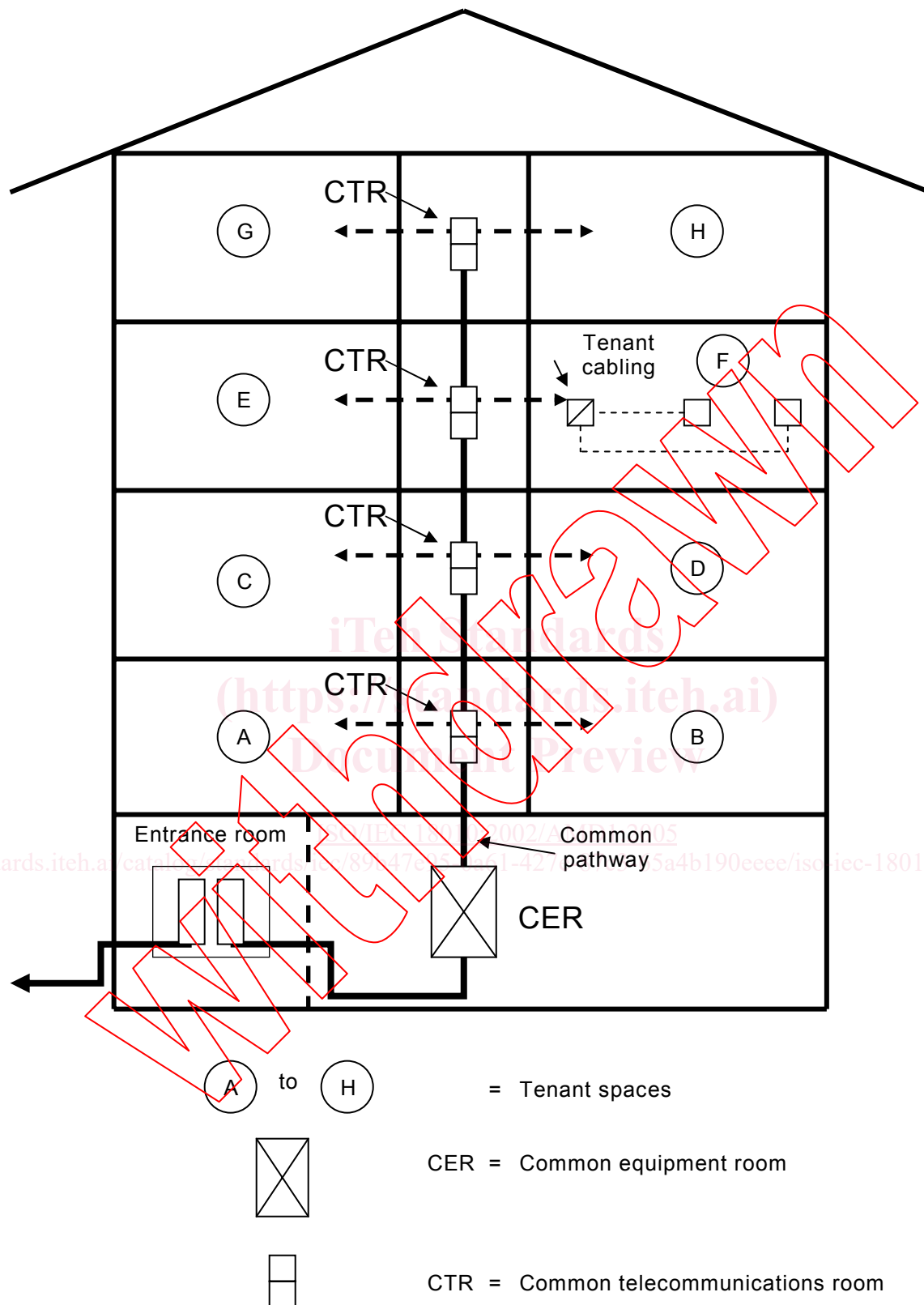


Figure A.1 – Example of pathways and spaces components used to service a multi-tenant building

Table A.1 – Summary of spaces used to service a multi-tenant building

Space name	Acronym	Primary responsible organization / secondary responsible organization
Entrance room		Building owner or agent
Access provider space		Access provider / building owner or agent
Service provider space		Service provider / building owner or agent
Common equipment room	CER	Building owner or agent

A.2 Entrance facilities

A.2.1 Entrance location considerations

Consideration should be given to facility, occupants' and users' telecommunications wireline and wireless connectivity needs. If access to both wireline and wireless services is required, then the entrance facilities may require adjustment in size, quantity and location. Mechanical fixtures (e.g., piping, ductwork, pneumatic tubing) not related to the support of the entrance facility should not be installed in, pass through, or enter the telecommunications entrance facility.

A.2.2 Telecommunications service entrance pathway

Telecommunications service entrance pathways shall be specified to support the initial and forecasted telecommunications needs including the total building area served and wireline and wireless tenant connectivity requirements. The forecasted telecommunications needs shall be agreed upon between the building owner and the designer. Accommodations should be made for multiple service entrance points to support multiple access providers.

A.2.3 Access

Access to the entrance room shall be controlled by the primary or secondary responsible organization (see table 1). Signage, if used, should be developed within the security plan of the building.

A.2.4 Wireless

A.2.4.1 Line of sight

Wireless transmission/reception device placement is critical to its performance. Obstructions to a wireless transmission/reception device function can take many forms including radio frequencies, electrical and physical objects. Obstructions may be on the same platform, on an adjoining building or be located some distance away. Wireless transmission/reception devices shall be in line of sight with its target system if required by the employed technology. Certain systems will not function properly if the wireless transmission/reception device's line of sight is obstructed.

A.2.4.2 Cable pathways

Cable pathways from tower-mounted wireless transmission/reception devices should be consolidated where possible on the tower and remain consolidated along their route to the access provider space. The most direct route between the wireless transmission/reception device and the entrance facility should be followed. To protect cables from environmental damage and isolate cables from pedestrian traffic, they should be placed inside conduit or in cable tray, or be otherwise secured from physical damage.