

STANDARDS UPDATE

Mike Gilmore



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INFRASTRUCTURE
ADVISORY BOARD
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STANDARDS UPDATE

North America

International

Europe

United Kingdom



Mike Gilmore
Managing Director
e-Ready Building



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Standards Activities



Member
JTC1 SC25 WG3: Generic Cabling
Convenor



JTC1 SC25 WG3 CITG: Cabling Implementation Task Group
JTC1 SC25 WG3 IPTG: Industrial Premises (Cabling) Task Group



Convenor
TC215 WG1: IT Cabling
Secretary
TC215 WG2



Leader - Special Task Force 362
Energy Efficiency and Broadband Deployment



Chairman
TCT7: Telecommunications - Installation Requirements
TCT7/-/1: Cabling infrastructure design, planning and commissioning
TCT7/-/3: Facilities and infrastructures
Meeting Secretary
TCT7/-/2: Cabling installation and UK implementation



FIA
www.fia-online.co.uk

Technical and Standards Director
Fibreoptic Industry Association

TIAB
www.fia-online.co.uk/TIAB

Director
Telecommunications Infrastructure Advisory Board

Mobile: +44 (0) 7860 110563

e-mail: mike.gilmore@btinternet.com



TIA-568-C Series

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ANSI/
TIA-568-C

ANSI/TIA-
568-C.0: 2009

Generic Telecommunications Cabling for Customer Premises

ANSI/TIA-
568-C.1: 2009

Commercial Building Telecommunications Cabling Standard

ANSI/TIA-
568-B.2: 2001

Commercial Building Telecommunications Cabling Standard:
Balanced Twisted-Pair Cabling Components

Addenda

1

2

3

4

5

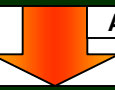
6

7

9

10

11



ANSI/TIA-
568-C.2: 2009

Balanced Twisted-Pair Telecommunications Cabling and Components
Standard

Addendum 1

ANSI/TIA-
568-C.2-1:2009

Balance requirements for E_2 and E_3 - Balance test methodology
Cross-modal crosstalk - Coupling attenuation requirements/testing

ANSI/TIA-
568-C.3: 2009

Optical Fiber Cabling Components Standard



TIA-492AAAD:?

850-nm laser-optimized, 50/125 μ m diameter class 1a GI MM optical fibers
suitable for manufacturing OM4 cabled optical fiber

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Premises-specific Standards

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ANSI/TIA-570-B: 2004

Residential Telecommunications Cabling Standard

ANSI/TIA-570-B-1: 2009

Addendum 1 – Additional Requirements for Broadband Coaxial Cabling



ANSI/TIA-862: 2002

Building Automation Systems Cabling Standard for Commercial Buildings



ANSI/TIA-1005: 2009

Telecommunications Infrastructure Standard for Industrial Premises

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Installation-related Standards

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ANSI/TIA-569-B:2004

Commercial Building Standard for Telecommunications Pathways and Spaces

Addenda 1



ANSI/TIA-569-C:?

Commercial Building Standard for Telecommunications Pathways and Spaces



ANSI/TIA-758-A:2004

Customer-owned Outside Plant Telecommunications Cabling Standard



ANSI/TIA-758-B:?

Customer-owned Outside Plant Telecommunications Cabling Standard



J-STD-607-A

Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications



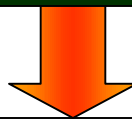
TIA-607-B

Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications



ANSI/TIA-606-A:2004

Administration Standard for Commercial Telecommunications Infrastructure



ANSI/TIA-606-A-1:2009

Administration of Equipment Rooms and Data Center Computer Rooms

Development of TIA-606-B deferred pending completion of ISO/IEC TR 14763-2-1

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Data Centres

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ANSI/TIA-942: 2005

Telecommunications Infrastructure Standard for Data Centers

ANSI/TIA-942-1: 2008

Coaxial Cabling Specifications and Application Distances

ANSI/TIA-942-2:?

Additional Guidelines for Data Centers

942, 942-1 and 942-2 contain:

- approximately 200 pages;
- 15 % relating to cabling - mostly by reference to TIA-568;
- recognised as a seminal work on data centre design.



BICSI

Data Center Design and Best Implementation Practices

Contains:

- approximately 500 pages;
- supports TIA-942;
- four pages dedicated to energy efficiency. ■

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ISO/IEC 11801

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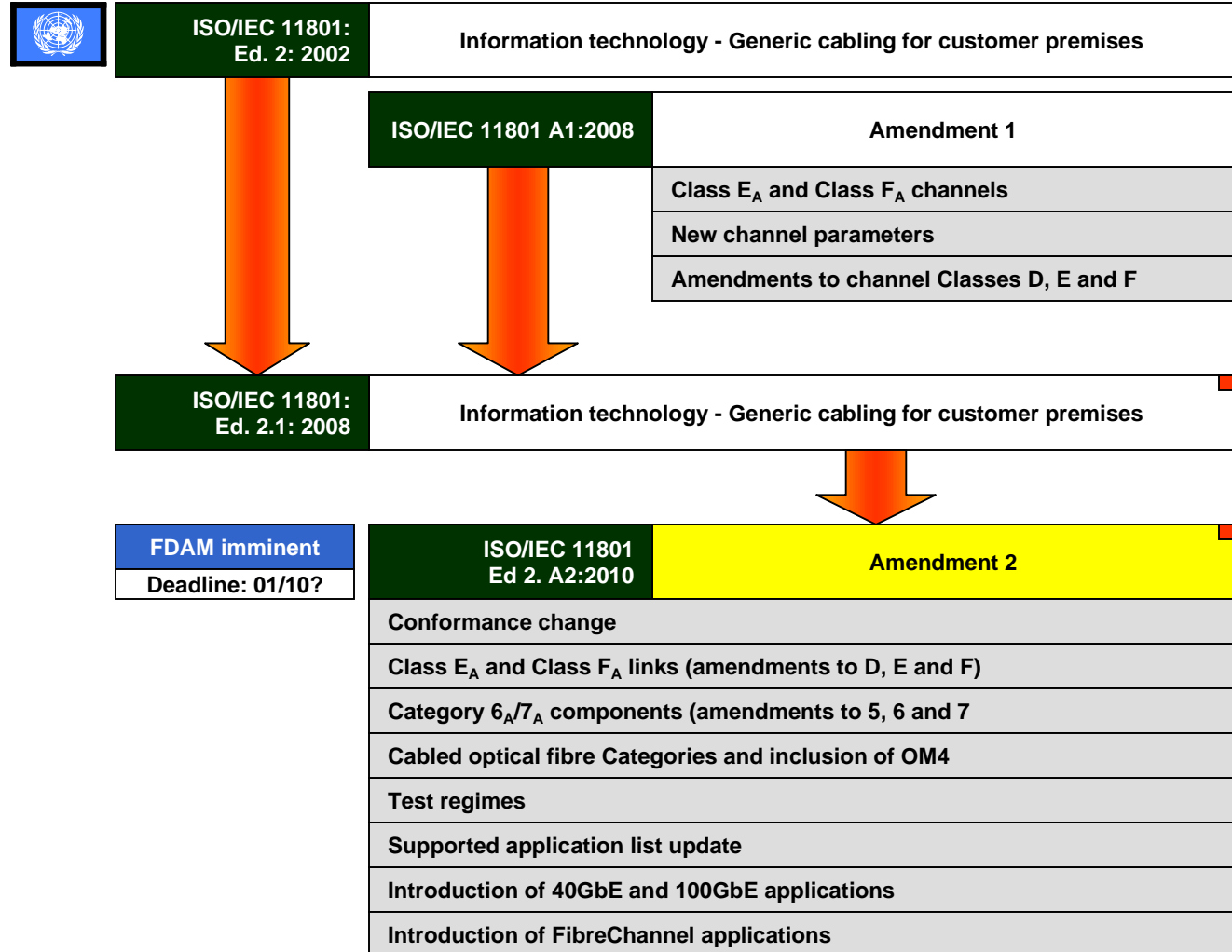
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Balanced Cabling Hierarchy

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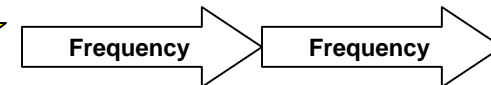
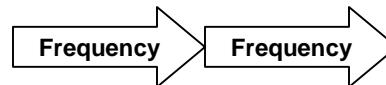
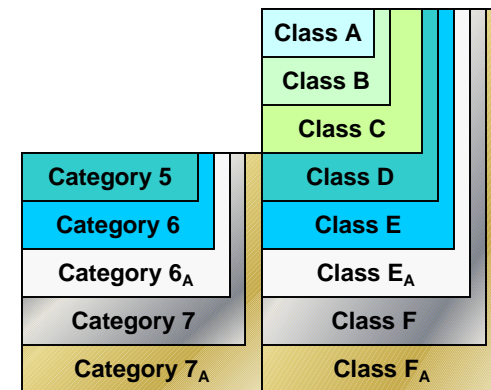
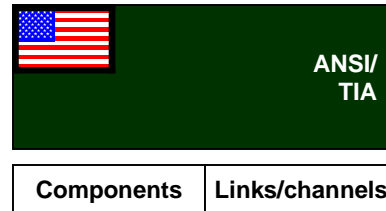
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Augmented Cat.6 /Class E_A

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North America

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CHANNELS



Class E_A is more stringent than Augmented Category 6

NEXT
PSNEXT

CABLES



Augmented Category 6 = Category 6_A

CONNECTIONS



Category 6_A is more stringent than Augmented Category 6
FOR SOME PARAMETERS

NEXT
PSNEXT

PERMANENT LINKS



Class E_A is more stringent than Augmented Category 6
FOR SOME PARAMETERS

NEXT
PSNEXT
RL



Augmented Category 6 is more stringent than Class E_A
FOR SOME PARAMETERS

PSAACR-F



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ISO/IEC TR 29125

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North America

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ISO/IEC TR 29125:?

Information technology - Telecommunications cabling guidelines for remote powering of terminal equipment

1st pDTR failed

DTR imminent

similar to



TIA-TSB-184:?

Guidelines for supporting power delivery over balanced twisted-pair cabling

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Premises-specific Standards - I

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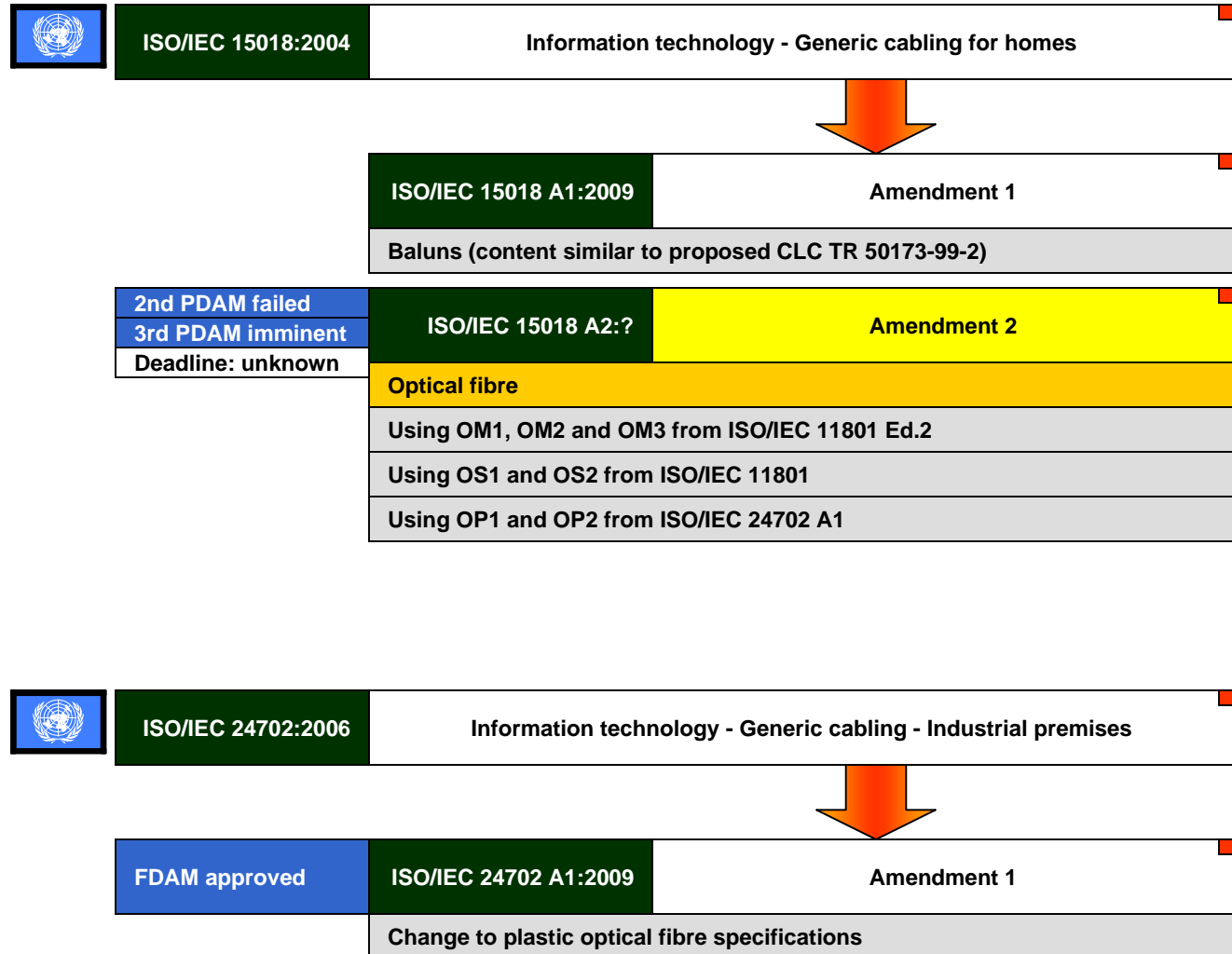
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Premises-specific Standards - II

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ISO/IEC 24764:?

Information technology - Generic cabling for data centres

FDIS Imminent

Deadline: 01/10

Content similar to published EN 50173-5:2007

Additional content

Class E_A and Class F_A channel reference implementations

High density OF connecting hardware

Introduction of array connecting hardware pin-out designations

Content similar to published proposed EN 50173-5 A.1: 2010

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Installation-related Standards - I

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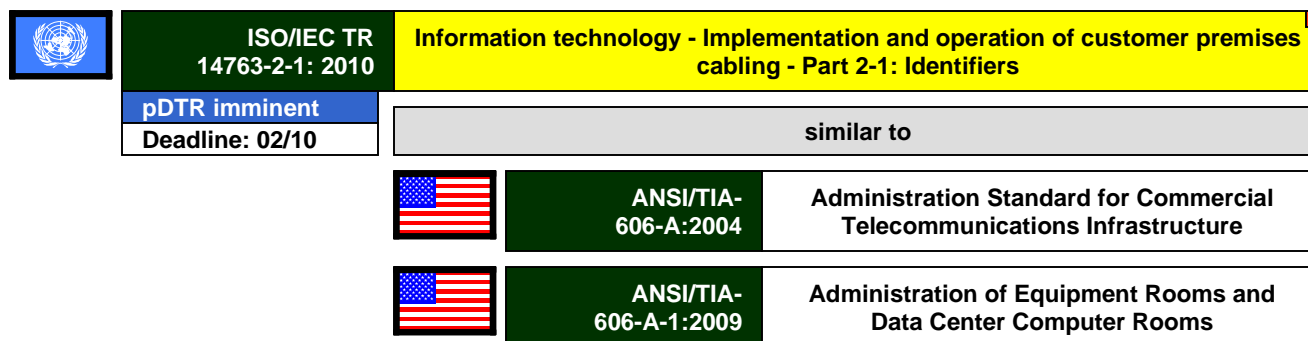
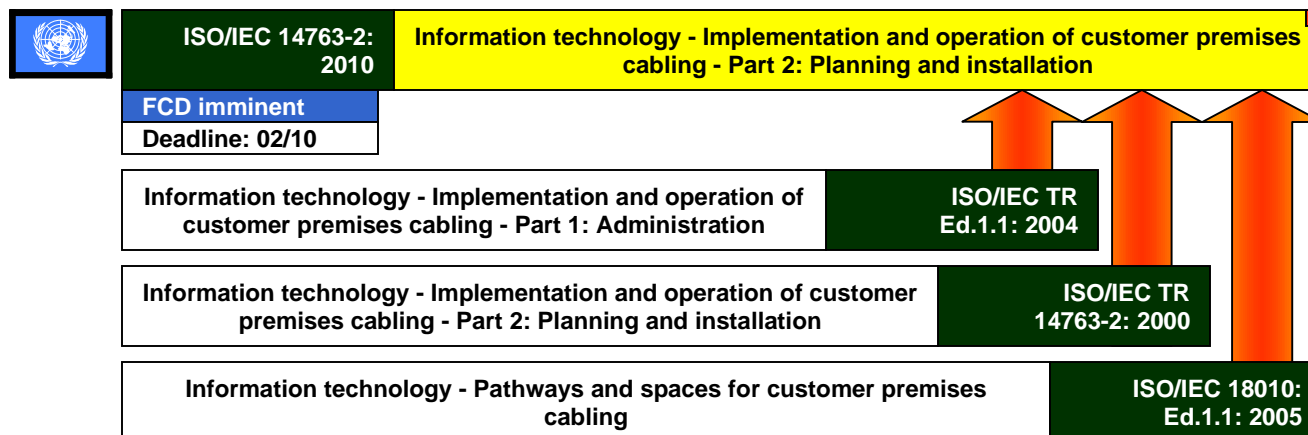
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Installation-related Standards - II

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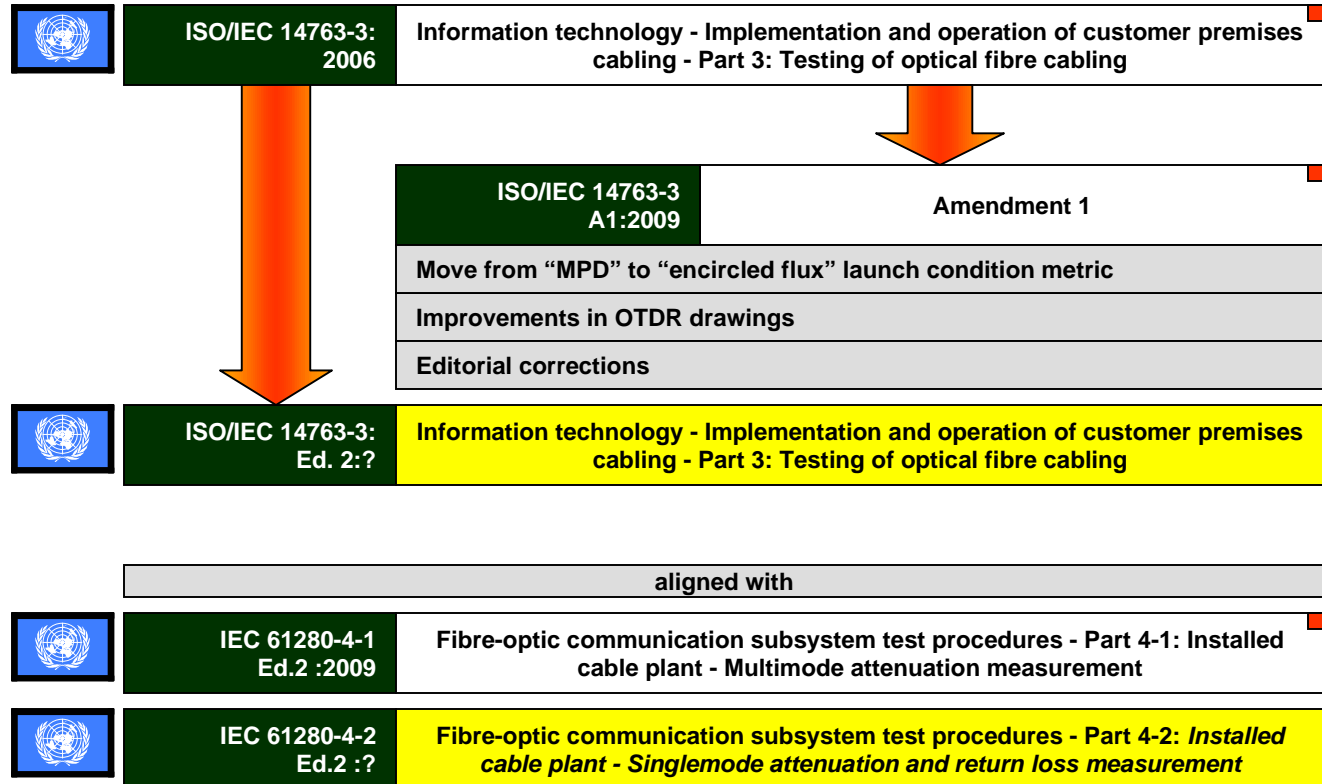
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Future plans - UK/US Proposal

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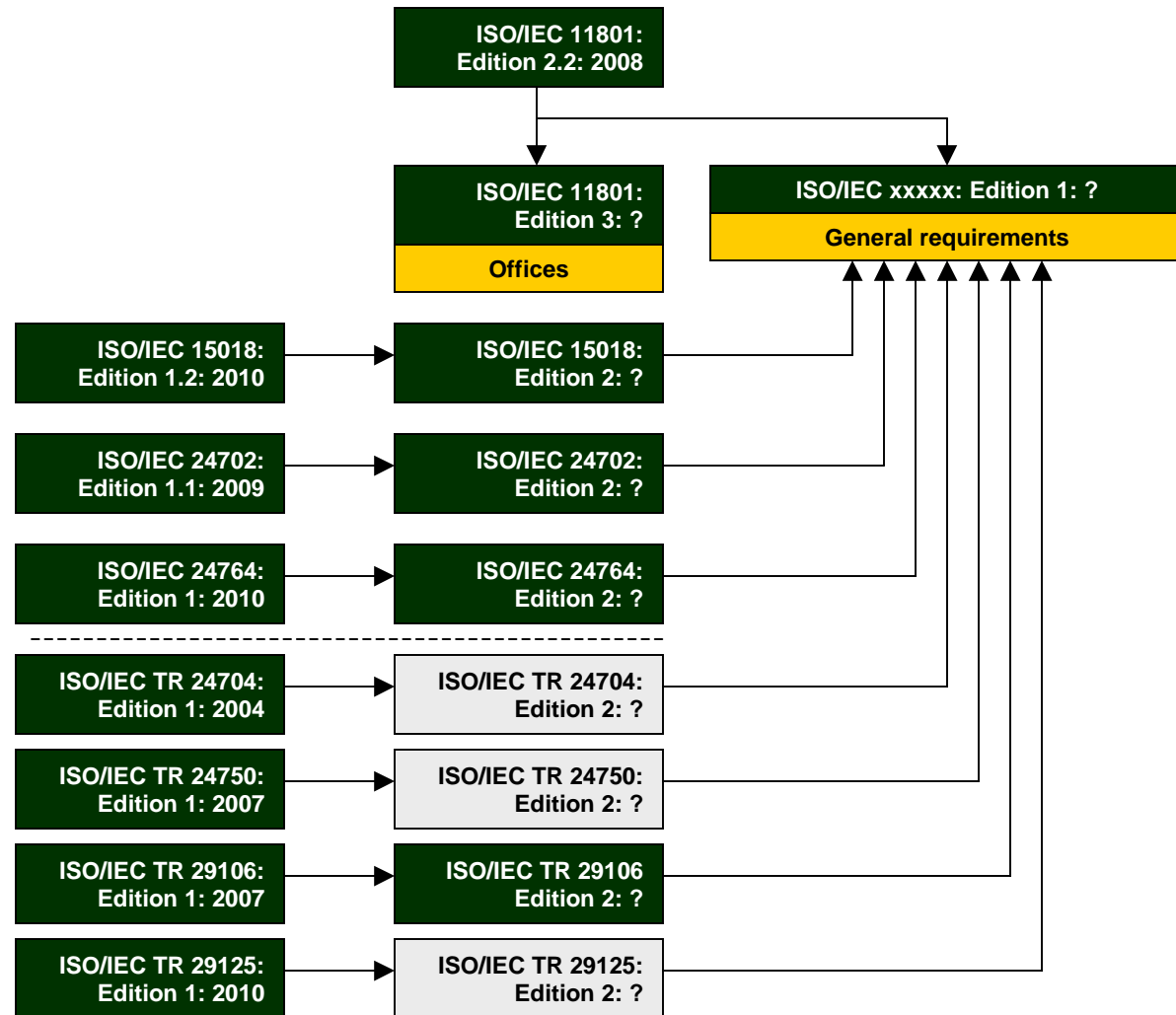
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EN 50173 Series

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(BS) EN 50173-x

Information technology - Generic cabling systems

(BS) EN 50173-1:
2007

General requirements

(BS) EN 50173-2:
2007

Office premises

(BS) EN 50173-3:
2007

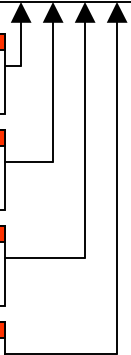
Industrial premises

(BS) EN 50173-4:
2007

Homes

(BS) EN 50173-5:
2007

Data centres



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EN 50173-1 Amendment

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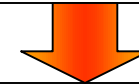
Europe

United Kingdom



(BS) EN 50173-:
2007

Information technology - Generic cabling systems: General requirements



(BS) EN 50173-1 A1:
2009

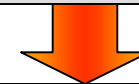
Amendment 1

New channel parameters

Amendments to Classes D, E, F channels and Class E_A, F_A channels

Amendments of BCT-C channels

Amendments to POF Categories and channels as per ISO/IEC 24702



5MP produced

Deadline: 01/10

(BS) EN 50173-1 A2:
2010

Amendment 2

Correction of MICE table for "E"

Amendments to Classes D, E, F links and Class E_A, F_A links

Further amendments of BCT-C channels

Category 6_A/7_A components (amendments to 5, 6 and 7)

Cabled optical fibre Categories and inclusion of OM4

Supported application list update

Introduction of 40GbE, 100GbE and FibreChannel applications/requirements

Test regimes

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EN 50173-2/-3/-4/-5 Amendments

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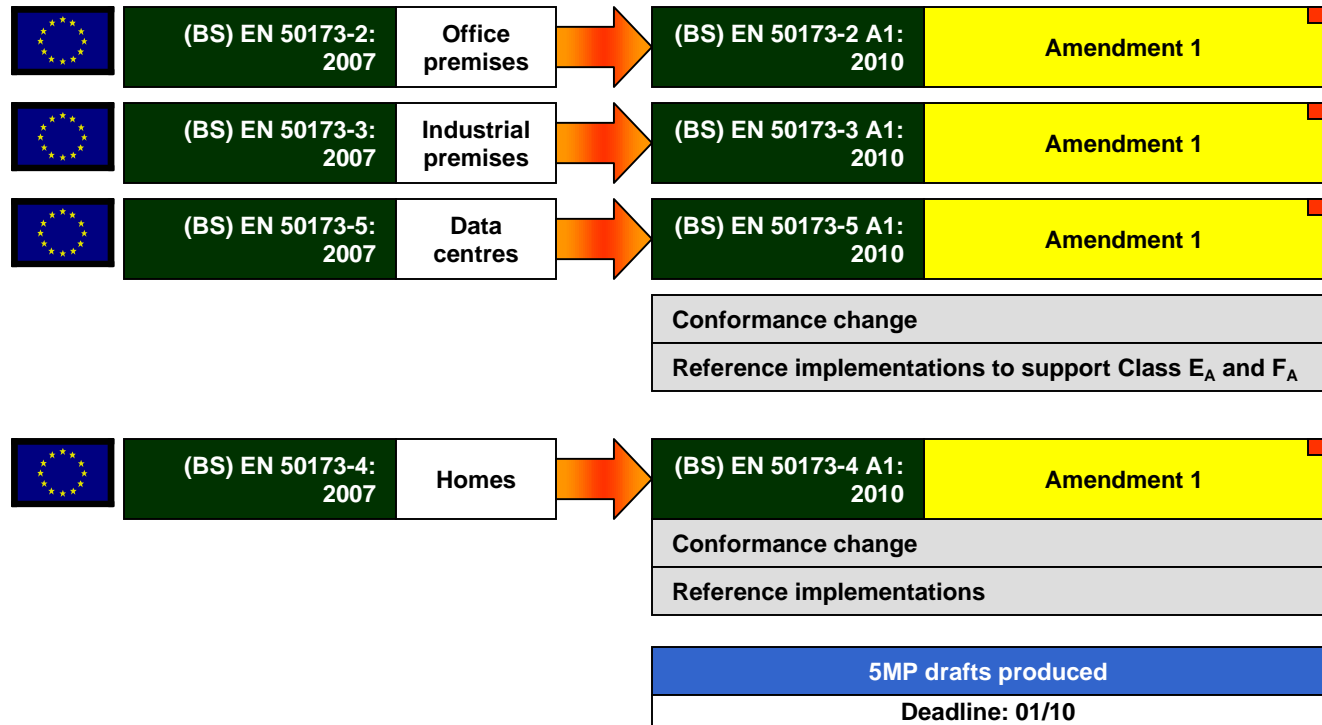
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CLC TR 50173-99-X Series

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North America

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(BS PD) CLC TR
50173-99-1

Cabling guidelines in support of 10GBASE-T



CLC TR 50173-99-2

The implementation of BCT applications using cabling
in accordance with EN 50173-4

DTR produced

Deadline: 02/10



CLC TR 50173-99-3

Residential cabling implementation including cable sharing for digital and
analog applications including satellite TV distribution for length up to 45 m



CLC TR 50173-99-4

Information technology - Generic cabling systems -
Distributed building services

similar to



ANSI/TIA-862: 2002

Building Automation Systems Cabling Standard for
Commercial Buildings

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Installation Standards - I

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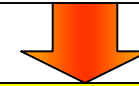
Europe

United Kingdom



(BS) EN 50174-1:
2009

Information technology - Cabling installation -
Part 1: Installation Specification and quality assurance

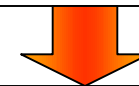


5MP imminent Deadline: 03/10	(BS) EN 50174-1 A1: 2010	Amendment 1
	Improvement of fire-management text Administration: confirmation and simplification Annex on treatment of marginal test results Amendment of "entrance facility" text	



(BS) EN 50174-2:
2009

Information technology - Cabling installation:
Installation planning and practices inside buildings



5MP imminent Deadline: 03/10	(BS) EN 50174-2 A1: 2010	Amendment 1
	Improvement of fire-management text Amendment of "entrance facility" text New clause: Homes: focusing on pathways and spaces New clause: Data Centres	

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Installation Standards - II

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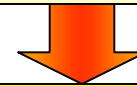
United Kingdom



(BS) EN 50174-3:
2003

Information technology - Cabling installation:
Installation planning and practices outside buildings

- A good basic standard but
- does not cover many items of day-to-day interest to installers
 - better addressed in FCD 14763-2
 - structure needs revision to match EN 50174-2:2009



(BS) EN 50174-3:
2010

Information technology - Cabling installation:
Installation planning and practices outside buildings



(BS) EN 50310 Ed.2:
2006

Information technology - Application of equipotential bonding and earthing in
buildings with technology equipment

- defines "ideal" requirements



(BS) EN 50310 Ed.3:
2010

Information technology - Application of equipotential bonding and earthing in
buildings with technology equipment

5MP produced

Deadline: 11/09

- new document is normative from EN 50174-1 and -2
- explains the appropriate improvements in all circumstances
 - up to and including the ideal
- easier to read and understand
- construction of bonds specified

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EN 50346 Revision

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**(BS) EN 50346
Ed.1.1: 2007**

Information technology - Cabling installation -
Testing of installed cabling



**(BS) EN 50346
Ed.1.1 A2: 2009**

Information technology - Cabling installation -
Testing of installed cabling



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EN 50600 Series

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	CLC TC 215	Electrotechnical aspects of telecommunication equipment
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TC 215 WG1		
Customer premises cabling	→	Cabling design

TC 215 WG2		
Electrical safety	→	Cabling installation - Quality assurance and installation practices

TC 215 WG3		
Facilities and infrastructures		



PROJECT NO. 1: DATA CENTRES		
------------------------------------	--	--

	EN 50600-1	Data centres - Facilities and infrastructures Part 1: General requirements
--	-------------------	---

EN 50600-2-1	Data centres - Facilities and infrastructures Part 2-1: Building construction
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EN 50600-2-2	Data centres -Facilities and infrastructures Part 2-2: Power distribution
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EN 50600-2-3	Data centres - Facilities and infrastructures Part 2-3: Environmental control
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EN 50600-2-4	Data centres - Facilities and infrastructures Part 2-4: Cabling infrastructure
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EN 50600-.....	
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The "Green" Agenda

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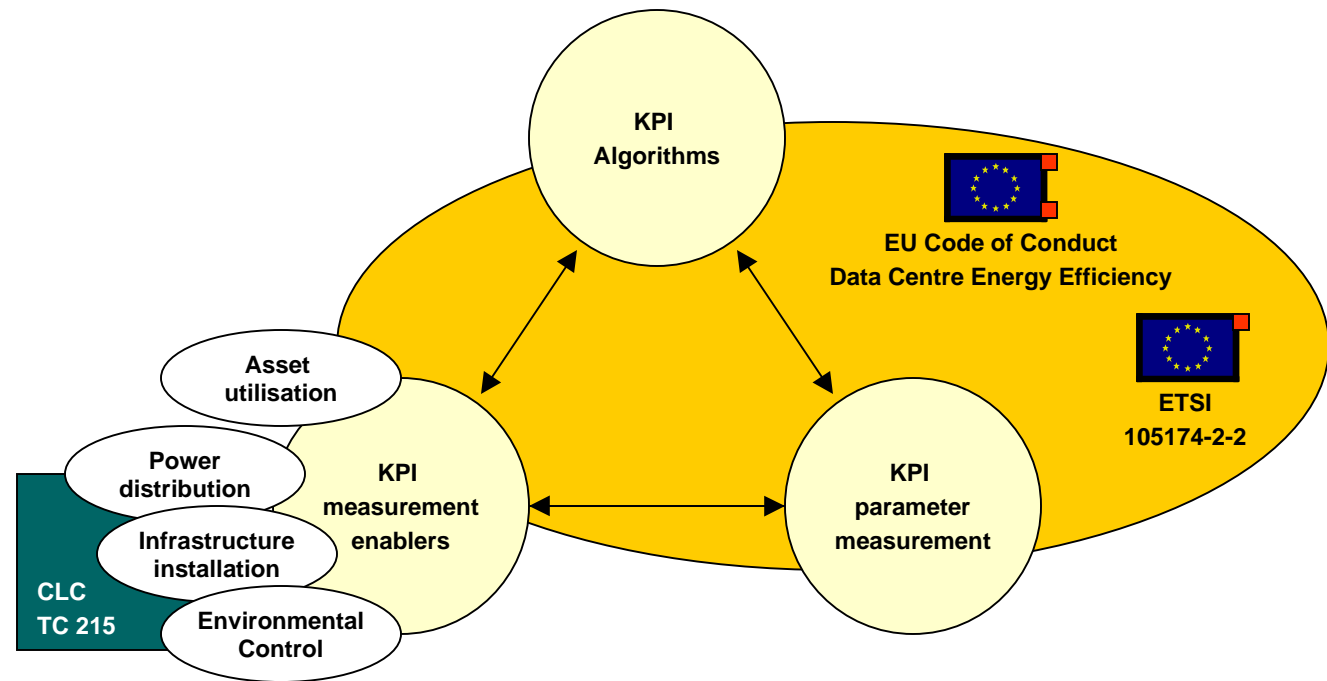
Europe

United Kingdom



CLC BT WG 132-3

Data Centre Energy Efficiency
Advisory Group



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BS 6701:2010

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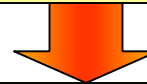
BS 6701:2004

Telecommunications equipment and telecommunications cabling -
Specification for installation, operation and maintenance

Structure

..
4
5
..

Requirements for installers of telecommunications equipment and telecommunications cabling
Requirements for owners of premises housing telecommunications systems



BS 6701:2010

Telecommunications equipment and telecommunications cabling -
Specification for installation, operation and maintenance

Structure

..
4
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Requirements for owners of premises housing telecommunications systems
Requirements for installers of telecommunications equipment and telecommunications cabling

CREATED IN SUPPORT OF BS 6701:2004 AND THE EN 50174 SERIES (EDITION 1)



BS BIP 0007:2004

Telecommunications cabling and equipment installations-
A guide to requirements and responsibilities

Decision taken not to re-publish on revision of BS 6701

To be withdrawn in 2009

Trade associations may choose to publish their own documents

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BS 8492:2009

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PENDING THE EXTENSION OF THE EU CPD/CPR TO COMMUNICATIONS CABLING



BS 8492:2009

Telecommunications equipment and telecommunications cabling -
Code of practice for fire performance and protection

This British Standard details:

- recommendations for fire performance and protection of all types of equipment and cabling via:
 - a) designing and implementing cabling infrastructures;
 - b) selecting products, including materials and construction;
 - c) minimizing fire spread;
 - d) increasing safety levels for personnel and property.
- the relationship between its recommendations, the usage of premises and fire protection measures.

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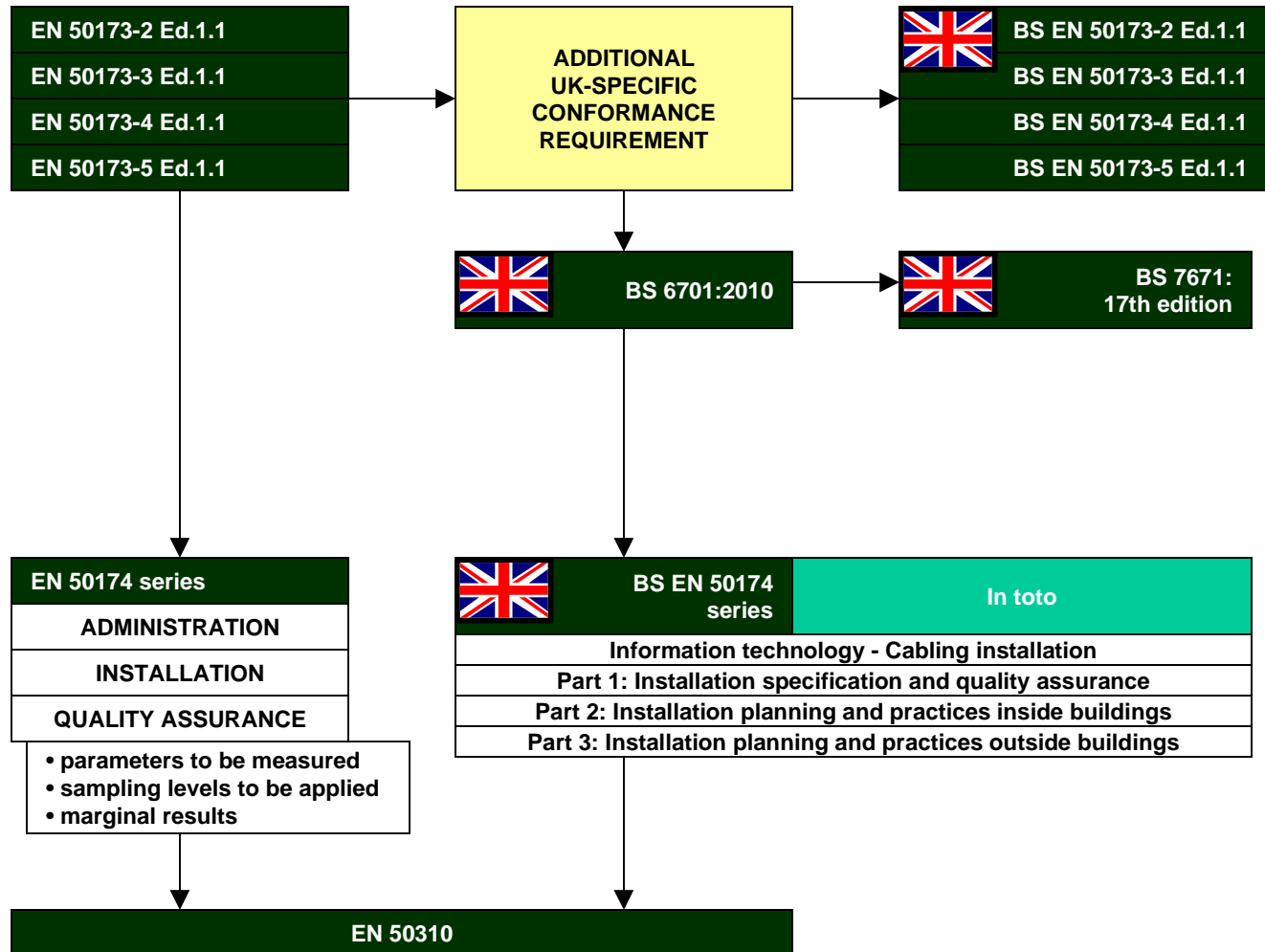
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The End



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