AS/NZS ISO/IEC 15018:2005
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AS/NZS ISO/IEC 15018:2005

Australian/New Zealand Standard™

Information technology—Generic cabling for homes

STANDARDS AUSTRALIA

STANDARDS NEW ZEALAND
Paerewa Aotearoa

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CT-001, Communications Cabling. It was approved on behalf of the Council of Standards Australia on 16 December 2004 and on behalf of the Council of Standards New Zealand on 23 December 2004.
This Standard was published on 4 February 2005.

The following are represented on Committee CT-001:

Australian Chamber of Commerce and Industry
Australian Communications Authority
Australian Communications Industry Forum
Australian Electrical and Electronic Manufacturers Association
Australian Information Industry Association
Australian Telecommunications Users Group
BICSI Australia
Electrical Compliance Testing Association
Energy Supply Association of Australia
Engineers Australia
National Electrical and Communications Association
New Zealand Consulting Interests
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Additional Interests:

Belden Australia
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International Testing and certification Services
Jamsam
JB Hunter Technology
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Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 04495.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF

AS/NZS ISO/IEC 15018:2005

Information technology—Generic cabling for homes

RECONFIRMATION NOTICE

Technical Committee CT-001 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 25 September 2015.

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The following are represented on Technical Committee CT-001:

Australian Chamber of Commerce and Industry
Australian Communications and Media Authority
Australian Council of Trade Unions
Australian Industry Group
Australian Information Industry Association
BICSI South Pacific
Energy Networks Association
Engineers Australia
KNX National Group
National Electrical and Communications Association
Telecommunications Users Association of New Zealand

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Australian/New Zealand Standard™

Information technology—Generic cabling for homes

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CT-001, Communications Cabling.

This Standard is identical with, and has been reproduced from, ISO/IEC 15018:2004, *Information technology—Generic cabling for homes*.

ISO/IEC 15018:2004 was prepared by an ISO/IEC international Standards Committee which involved active participation and contribution from the members of the Joint Standards Australia/Standards New Zealand Committee CT-001, Communications Cabling.

The objective of this Standard is to provide home owners, architects, designers, manufacturers, installers, maintainers and users, with requirements to ensure compatibility with equipment and services and to ensure performance of infrastructure to meet present and foreseeable future requirements.

The terms ‘normative’ and ‘informative’ are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

As this Standard is reproduced from an international standard, the following applies:

(a) Its number appears on the cover and title page while the international standard number appears only on the cover.

(b) In the source text ‘this International Standard’ should read ‘this Australian/New Zealand Standard’.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
IEC		AS	
60512	Electromechanical components for electronic equipment—Basic testing procedure and measuring methods	3726	Electromechanical components for electronic equipment—Basic testing procedure and measuring methods
60512-2	Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests	3726.2	Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests
60512-3	Part 3: Current-carrying capacity tests	3726.3	Part 3: Current-carrying capacity tests
IEC		AS/NZS	
61935	Generic cabling systems—Specification for the testing of balanced communication cabling in accordance with ISO/IEC 11801	3087	Telecommunications installations—Generic cabling systems
61935-1	Part 1: Installed cabling	3087.1	Part 1: Specification for the testing of balanced communication cabling

Only referenced documents that have been adopted as Australian or Australian/New Zealand Standards have been listed.

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INTRODUCTION

This standard specifies a generic cabling for three groups of applications in homes:

- Information and Communications Technologies (ICT);
- Broadcast and Communications Technologies (BCT);
- Commands, Controls and Communications in Buildings (CCCB);

as shown in Figure 1, and it is intended to guide installations in new buildings or refurbishments. (Cabling is a part of the infrastructure that supports home systems.)

This standard also applies where cabling is installed to support only one or two of the three application groups listed above.

This standard specifies a generic cabling infrastructure based upon balanced cabling and/or coaxial cabling. ICT channels specified in this standard include optical fibre. The wider use of fibre optical cabling in a home is for further study.

These groups of applications may also be supported by different types of cabling, which may be subject to other standards. For example, ISO/IEC 11801 specifies generic cabling for ICT applications in general for the office environment. While the cabling structure and reference implementations are matched to the home environment in this standard, the channel performances specified for ICT are identical to those specified in ISO/IEC 11801.

This standard specifies a generic cabling for a home that may support ICT, BCT and CCCB application groups. Because it is designed to cover the three major groups, the cabling system may be installed prior to the selection of specific applications. The home may contain one or more buildings (e.g. farm) or may be within a building which contains more than one home (e.g. one home in a multi-dwelling building).

The campus or backbone cabling connecting individual homes is built according to the relevant standard (for instance ISO/IEC 11801 or IEC 60728).

Generic cabling realised according to this standard:

a) allows deployment of a wide range of applications without changes to the fixed cabling infrastructure;
b) provides a platform to support moves, adds and changes of connectivity.

This standard provides:

- users with an application-independent generic cabling for applications run in homes;
- users with a flexible cabling scheme such that changes are both easy and economical;
- building professionals (for example, architects) with guidance for accommodating cabling before specific requirements are known, i.e. in the initial planning either for construction or refurbishment;
- industry and applications standardisation bodies (e.g. ITU-T, ISO/IEC JTC 1/SC 6, ISO/IEC JTC 1/SC 25/WG 1, IEC TC 100) with a cabling system that supports current products and provides a basis for future product development in home electronic systems;
- users, designers and manufacturers of application-specific cabling systems with advice on interfacing to this generic cabling;
- suppliers of cabling components and installers of cabling with relevant requirements;
- service providers with a distribution system for their services.

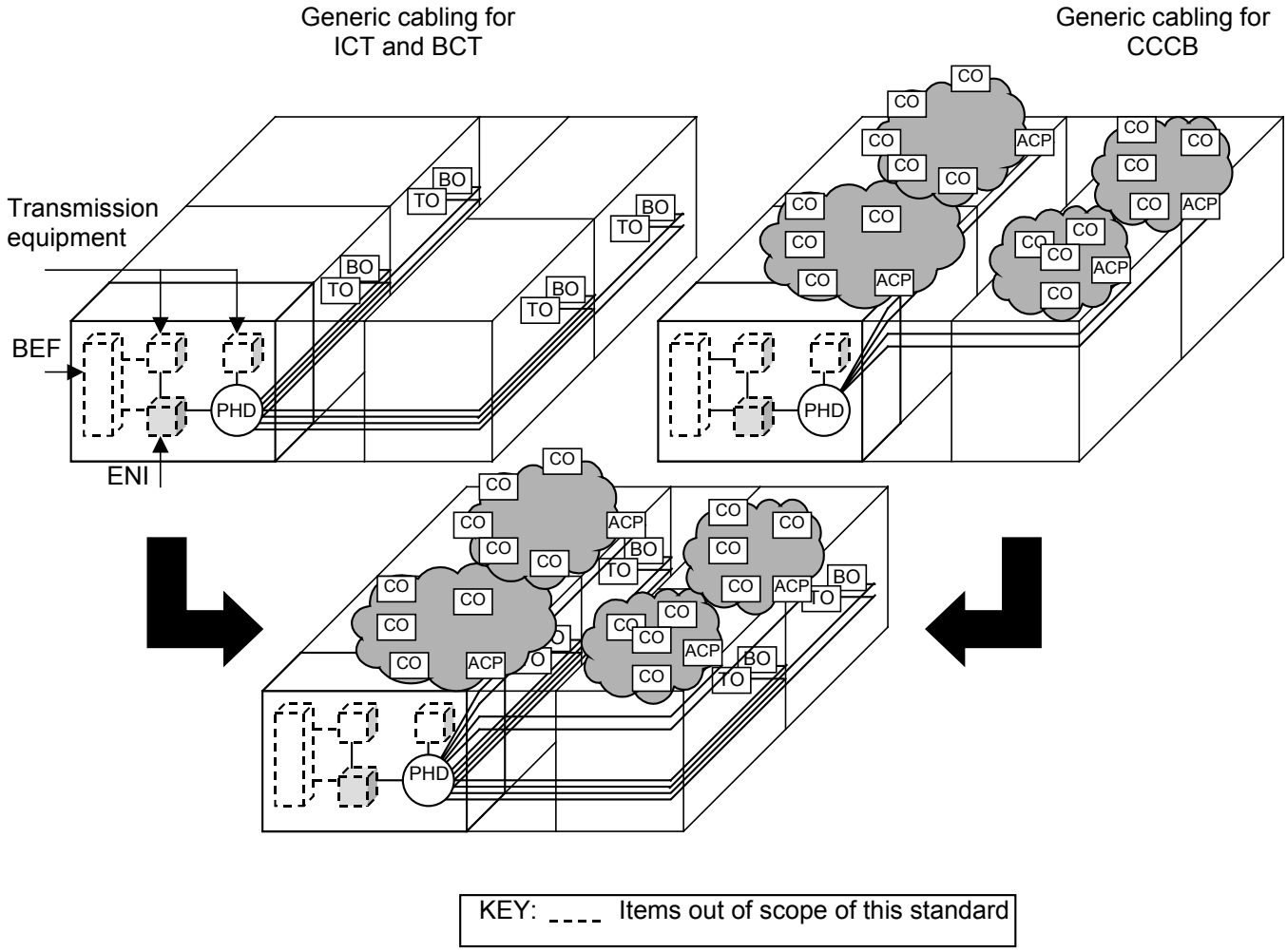

Figure 1 – Overview of a generic cabling for home

A number of ICT, BCT and CCCB applications have been analysed to determine the requirements for a generic cabling (see Table D.2) and to specify the minimum performance of channels given in clause 7. These requirements, together with the logical and physical models described in clauses 5 and 6, have been used to develop the requirements for cabling components and to stipulate their arrangement into generic cabling systems.

Wireless and (unguided) infrared as well as Power Line Communication may also be used for applications mentioned above. Media used for these technologies are not covered in this standard.

NOTES

AUSTRALIAN/NEW ZEALAND STANDARD

Information technology—Generic cabling for homes

1 Scope

This International Standard specifies generic cabling for homes. A home may contain one or more buildings or may be within a building that contains more than one home.

This standard specifies a generic cabling for three groups of applications:

- Information and Communications Technologies (ICT);
- Broadcast and Communications Technologies (BCT);
- Commands, Controls and Communications in Buildings (CCCB).

It specifies cabling that comprises one or more of the following:

- balanced cabling;
- coaxial cabling;
- optical fibre cabling.

The standard specifies the requirements for the design and configuration of the generic cabling with respect to:

a) structure and topology;
b) minimum configuration;
c) performance requirements for permanent links and channels;
d) density and location of connection points;
e) interfaces to application-specific equipment and external networks;
f) coexistence with other building services.

Although safety (electrical, fire, etc.) and electromagnetic compatibility (EMC) requirements are outside the scope of this International Standard and are covered by other standards and regulations, information given in this International Standard may be of assistance in meeting these requirements.

NOTE 1 National regulations and local codes may preclude carrying certain services on the cabling specified in this standard.

NOTE 2
- Test requirements in this standard are for system designers.
- The installation tests should be decided between supplier and customer or according to the relevant installation guide.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60189-1:1986, *Low-frequency cables and wires with PVC insulation and PVC sheath – Part 1: General test and measuring methods*
Amendment 3 (1992)

IEC 60352-3, *Solderless connections – Part 3: Solderless accessible insulation displacement connections – General requirements, test methods and practical guidance*

IEC 60352-4, *Solderless connections – Part 4: Solderless non-accessible insulation displacement connections – General requirements, test methods and practical guidance*