



DPC: 22/30454210 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

Date: 06 April 2022

Origin: International

Latest date for receipt of comments: 06 April 2022

Project No. 2019/01648

Responsible committee: TCT/7 Telecommunications - Installation requirements

Interested committees:

Title: Draft BS ISO/IEC 15045-3-2 Ed.1.0 Information technology - Home Electronic System - HES Gateway Privacy Framework.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

- i) has any issues related to 3rd party IPR, patent or copyright
- ii) affects other national standard(s)
- iii) requires additional national guidance or information

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Responsible Committee Secretary: Ms Joy Tan (BSI)

Direct tel:

E-mail: joy.tan@bsigroup.com

Full document details: 22/30454210 DC

Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



JTC1-SC25/3084/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:

ISO/IEC 15045-3-2 ED1

DATE OF CIRCULATION:

2022-03-11

CLOSING DATE FOR COMMENTS:

2022-05-06

SUPERSEDES DOCUMENTS:

JTC1-SC25/3001/CD, JTC1-SC25/3034B/CC

IEC ISO/IEC JTC 1/SC 25 : INTERCONNECTION OF INFORMATION TECHNOLOGY EQUIPMENT

SECRETARIAT:

Germany

SECRETARY:

Mr Marco Peter

OF INTEREST TO THE FOLLOWING COMMITTEES:

TC 23, SyC AAL, SEG 9, ISO/IEC JTC 1/SC 41

PROPOSED HORIZONTAL STANDARD:



Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.

FUNCTIONS CONCERNED:

☐ EMC

☐ ENVIRONMENT

☐ QUALITY ASSURANCE

☐ SAFETY

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

TITLE:

15045-3-2 Information technology — Home Electronic System — HES Gateway Privacy Framework

NOTE FROM TC/SC OFFICERS:

The working parties supplied comments, which have been included.

The WG 1 experts were also asked for comments according to the WG 1 action items from last September.

No additional changes were proposed.

The agreed next stage as CD2 are ready for the member bodies to provide comments.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Information technology –
Home Electronic System (HES) gateway –**
**DRAFT
Part 3-2: Privacy framework**
FOREWORD

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International Standard ISO/IEC 18012-4 has been prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information Technology.

This edition includes the following significant technical changes with respect to the previous edition:

The text of this International Standard is based on the following documents:

FDIS	Report on voting
XX/XX/FDIS	XX/XX/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

The National Committees are requested to note that for this document the stability date is 20XX..

THIS TEXT IS INCLUDED FOR THE INFORMATION OF THE NATIONAL COMMITTEES AND WILL BE DELETED AT THE PUBLICATION STAGE.

INTRODUCTION

The *Home Electronic System* (HES) is a set of standards that support communication, control, and monitoring applications for homes and buildings. However, homes and buildings present a heterogeneous and changing networking environment, and many of these networks and applications (including some HES standards) are not directly interoperable with each other. HES standards achieve interoperability through the ISO/IEC 15045 *HES gateway* standards which rely on ISO/IEC 18012 *Guidelines for product interoperability* standards to support functional interworking among the dissimilar home devices, applications, protocols, and networks found in this environment.

The HES gateway enables an open and adaptable market for incompatible products by specifying a standardized modular system intended to provide interoperability among the diversity of networks found in homes and buildings. The HES interoperability system does not require modification of the various networks, applications, or protocols that use it. Appropriate interworking functions are used for translating network messages through interface modules to a common lexicon expression which is then exchanged on a private internal network bus protocol. A protected application platform using the bus protocol supports an expanding array of services for both the applications and the network.

In summary, the HES gateway standard series specifies a standardized modular dedicated private internal network system that includes:

- interfaces (i.e., *interface* modules) for communication and semantic translation among dissimilar home and building area networks (HANs), as well as with external wide area networks (WANs), and
- a platform for supporting an expanding array of application services (i.e., *service* modules), and
- a secure communication path among these modular elements with access restricted to the appropriate elements in order to protect data, safety and privacy.

Relation to existing work

The concepts of product interoperability are introduced in ISO/IEC 18012-1 *Guidelines for product interoperability – Part 1: Introduction*. The interworking function (IWF) is described in ISO/IEC 18012-2 *Guidelines for product Interoperability – Part 2: Taxonomy and application interoperability model*. The message content, including applications, interface and service objects are specified in ISO/IEC 18012-3 *Guidelines for product Interoperability – Part 3: Lexicon*. The method and format of communication packet exchanges or direct API exchanges within a gateway are described in ISO/IEC 18012-4 *Guidelines for product Interoperability – Part 4: Event encoding*.

Privacy in HES gateway

The HES gateway is described in ISO/IEC 15045-1 *Home Electronic System (HES) gateway – Part 1: A residential gateway model for HES*. Several structural configurations of the HES gateway are described in ISO/IEC 15045-4-1 *HES gateway – Part 1: Structural class and module requirements*. All structural classes use the HES interoperability system described above. However, for classes that use physically separated modules, communications among modular elements is provided by a dedicated private serial bus (i.e., Ethernet) and utilises a set of protocols now known as the common language internal protocol (CLIP), originally called the GL bus in ISO/IEC 15045-2 *HES gateway – Part 2: Modularity and protocol*. All HES gateway structural class configurations use the same interworking functions, including lexicon, and event encoding.

Privacy, security and safety requirements for the HES gateway are specified in ISO/IEC 15045-3-1 *Home Electronic System (HES) gateway – Part 3-1: Introduction to privacy, security and safety*. This ISO/IEC 15045-3-2 *Home Electronic System (HES) gateway – Part 3-2: HES gateway privacy framework* provides specifications that fulfil the privacy requirements of Part 3-1. These privacy considerations are based upon ISO/IEC 29100.

The privacy aspects in this ISO/IEC 15045-3-2 standard are focused on individual premises, and not focused on apartment complexes or multi-family dwellings. Such situations are handled

with “*interconnected gateways*” structural class. The ISO/IEC 15045-4-5 standard will detail the privacy considerations and enhancements relating to these types of dwellings.

Figure 1 shows the core interoperability and HES gateway series of standards and where this ISO/IEC 15045-3-2 standard fits into series.

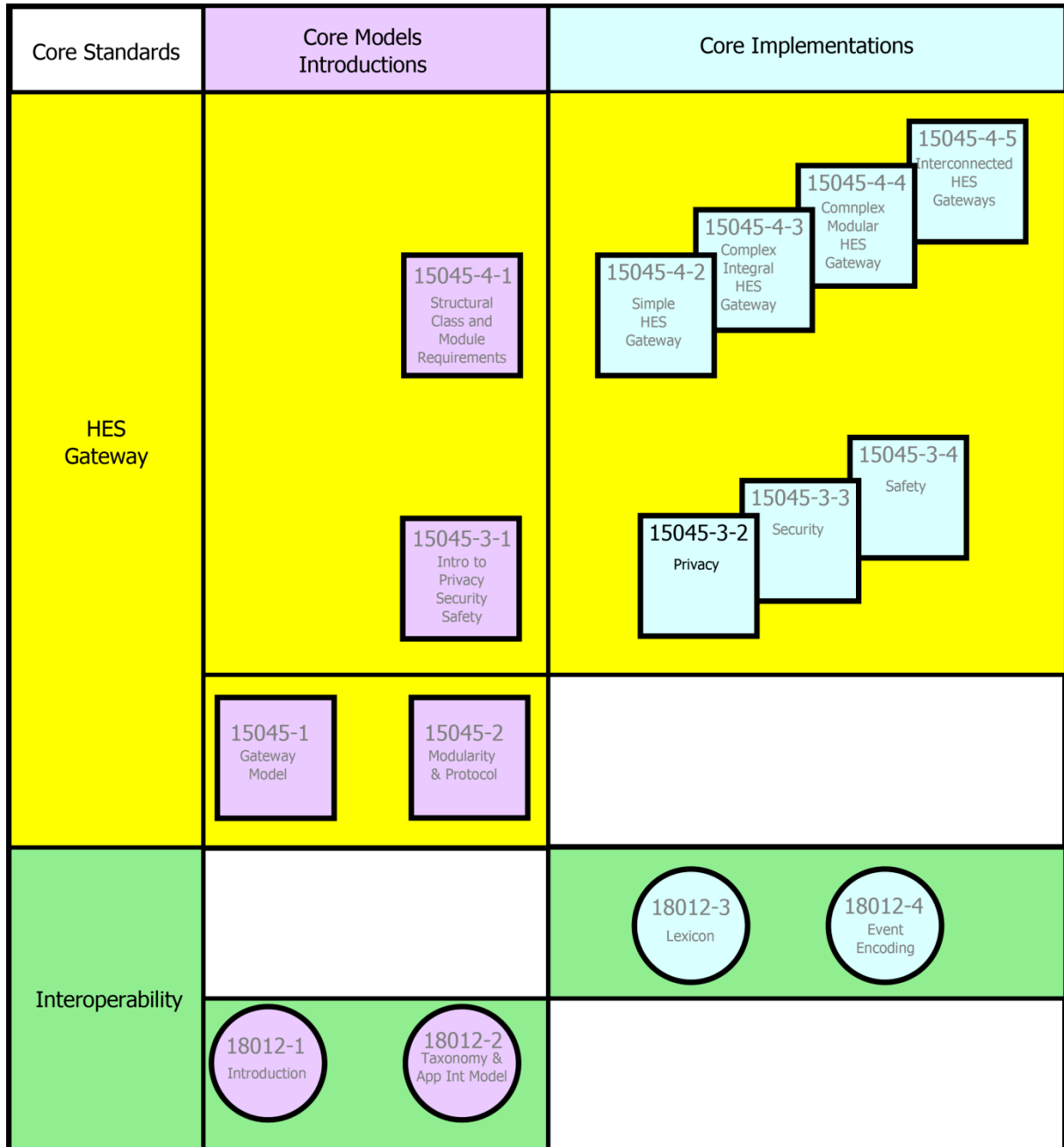


Figure 1 – IEC/ISO 15045-3-2 Standard within the Core Interoperability and HES gateway Standards

Future features

The HES gateway is structured to provide a foundation for which features can be added as appropriate while maintaining the privacy, security, safety and interoperability capabilities. The interoperable objects, domains and services defined in the HES Lexicon can be expanded.

INFORMATION TECHNOLOGY– HOME ELECTRONIC SYSTEM (HES) – HES GATEWAY

HES gateway privacy framework

1 Scope

ISO/IEC 15045-3-2 establishes cybersecurity requirements for protecting the privacy of premises and personally identifiable information through the use of the HES gateway and related HES standards. This standard applies a set of principles to which the HES gateway must conform including consent, purpose legitimacy, collection limitation, data minimization, retention, accuracy, openness, and individual access.

The HES gateway is a modular interoperability interface for communications among premises networks, and also between premises networks and external networks (e.g., Internet access networks, IoT devices, etc.). It also provides a modular platform for interoperable services (e.g., plug-in apps performed in HES service modules).

2 Normative references

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

ISO/IEC 15045-1:2004, *Home Electronic System (HES) gateway – Part 1: A residential gateway model for HES*

ISO/IEC 15045-2:2012, *Home Electronic System (HES) gateway – Part 2: Modularity and protocol*

ISO/IEC 15045-3-1, *Home electronic system (HES) gateway – Part 3-1: Introduction to privacy, security, and safety [In progress]*

ISO/IEC 15045-4-1, *Home electronic system (HES) gateway – Part 4-1: Structural class and module requirements [In progress]*

ISO/IEC 15045-4-2, *Home electronic system (HES) gateway – Part 4-2: Simple HES gateway [In progress]*

ISO/IEC 18012-1:2004, *Home Electronic System – Guidelines for Product Interoperability – Part 1: Introduction*

ISO/IEC 18012-2:2012, *Home Electronic System – Guidelines for product interoperability – Part 2: Taxonomy and application interoperability model*

ISO/IEC 18012-3, *Home electronic system – Guidelines for product interoperability – Part 3: Lexicon [In progress]*

ISO/IEC 18012-4, *Home electronic system – Guidelines for product interoperability – Part 4: Event encoding [In progress]*

ISO/IEC 29100:2011, *Information technology – Security techniques – Privacy framework*

3 Terms, definitions, abbreviations and conventions

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

binding map

table that links inputs to outputs