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Interested committees:

Title: BS ISO/IEC 10192-4-3 Information technology - Home Electronic System (HES) interfaces

Part 4-3. Common user interface and cluster-to-cluster interface to support interworking among home cluster systems - Messaging

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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.

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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 Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.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

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- 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	Commend (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-SC25/3222/CD

COMMITTEE DRAFT (CD)

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JTC1-SC25/3165/CD, JTC1-SC25/3186A/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

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

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TITLE:

ISO/IEC 10192-4-3: Information technology - Home Electronic System (HES) interfaces - Part 4-3: Common user interface and cluster-to-cluster interface to support interworking among home cluster systems - Messaging

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INFORMATION TECHNOLOGY –

HOME ELECTRONIC SYSTEM (HES) INTERFACES –

Part 4-3: Common user interface and cluster-to-cluster interface to support interworking among home cluster systems – Messaging

FOREWORD

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International Standard ISO/IEC 10192-4-3 has been prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

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

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

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

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

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

- 124 • reconfirmed,
- 125 • withdrawn,
- 126 • replaced by a revised edition, or
- 127 • amended.

128

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

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

133

INTRODUCTION

A home cluster system is implemented by interconnecting several devices to deliver one or more applications. A cluster can function independently of other clusters. Cluster devices include sensors, actuators, a controller, and user interfaces. Multiple home cluster systems can be installed and operated in a single home for the following reasons:

- There are various types of application domains in the home such as lighting, safety, air conditioning, telecommunications, and audio/video, etc. One or more applications are implemented by the constituents of a cluster. If a user purchases several applications, multiple home cluster systems can be installed in a home.
- Home application vendors usually provide systems implemented in clusters of required devices. Depending on the user's needs, several application systems, possibly from different manufacturers, can be installed in a home as separate clusters.

A customer can access a device in a cluster via a user interface provided for that cluster. With multiple clusters a user needs to learn how to operate a range of different interfaces. This document provides the cluster-to-cluster interworking foundation necessary for a single common user interface to manage applications in multiple clusters.

Application-to-application and the resulting device-to-device collaboration are essential for providing integrated services in a multi-device HES environment. For example, if a fire monitoring system detects a fire, the indoor lights should be turned on and the fire announcements should be broadcast through available speakers in the house for prompt evacuation of the residents, the ventilation blowers should be stopped to avoid spreading the fire, and the public fire service should be contacted. This requires collaboration among fire detectors, indoor lights, speakers, HVAC and telecommunication devices. If the devices are located in different clusters, cluster-to-cluster interworking is required for collaboration among them.

In practice, a safety monitoring cluster might send out a fire-detected message and a lighting cluster might be ready to activate a lighting scene that alerts the occupant by turning on or flashing the appropriate lights. However, the two clusters usually do not have a way to communicate with each other especially if supplied by different manufacturers possibly using different protocols and messages. This document solves that problem by providing the necessary interworking and interoperability functionality to ensure that the clusters can work together.

When the cluster systems are in different HANs or use different protocols, the interworking is accomplished using the HES gateway (ISO/IEC 15045 series) and related interoperability standards (ISO/IEC 18012 series). For interworking between cluster systems using the same protocols and belonging to the same HAN, HES gateway services may optionally be used if the cybersecurity, privacy and safety features of the HES gateway are desired. This document does not require the Internet to operate, but can connect to the Internet if the application requires.

This document specifies the architecture for interworking home cluster systems where:

- The home cluster systems use different HANs or protocols, or
- The home cluster systems use the same HANs and protocols plus the services of the HES gateway.

Figure 1 shows the core interoperability and HES gateway standards. Figure 2 shows the common user interface series of standards designated ISO/IEC 10192-4, *Information technology – Home Electronic System (HES) interfaces – Common user interface and cluster-to-cluster interface to support interworking among home cluster systems*. ISO/IEC 10192-4 consists of three parts:

Part 4-1: Architecture

Part 4-2: Interfaces, services and objects

Part 4-3: Messaging

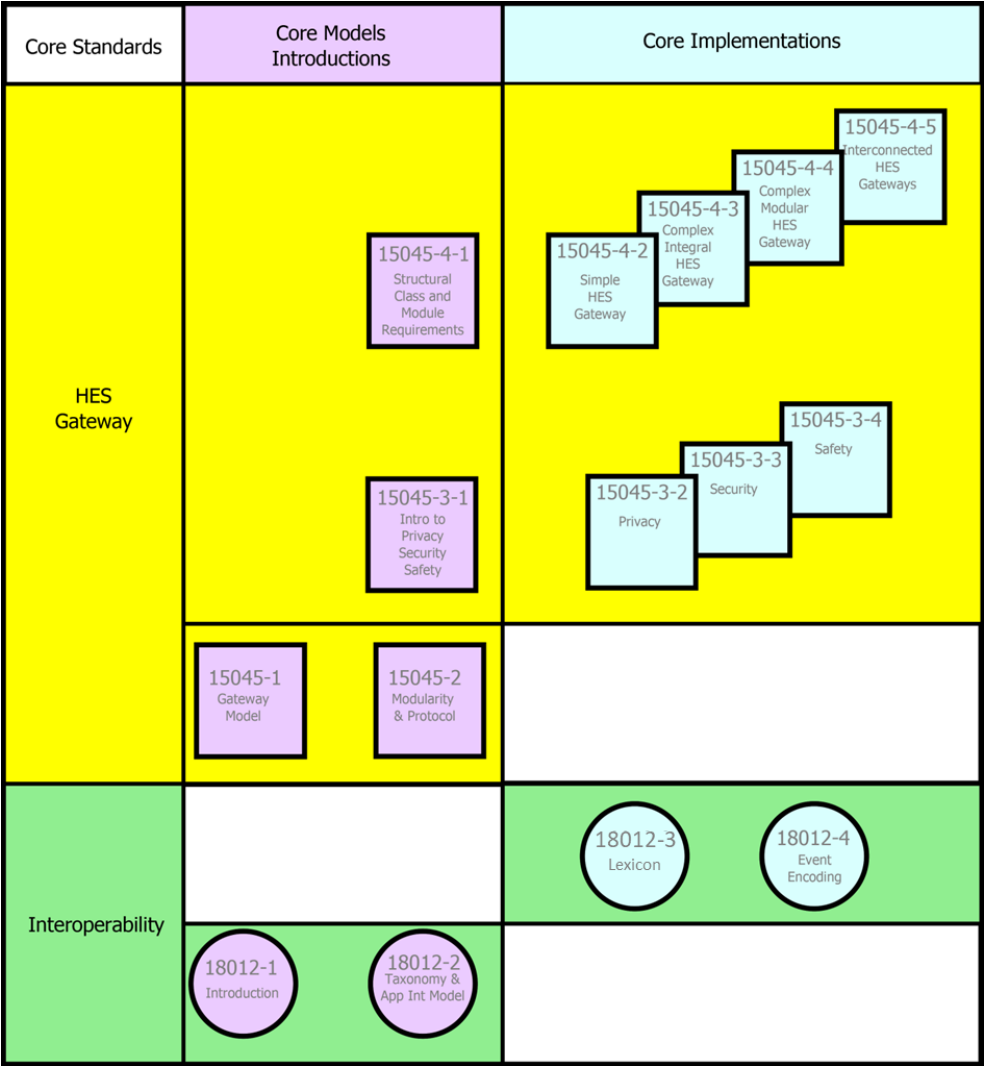


Figure 1 – Core interoperability and HES standards

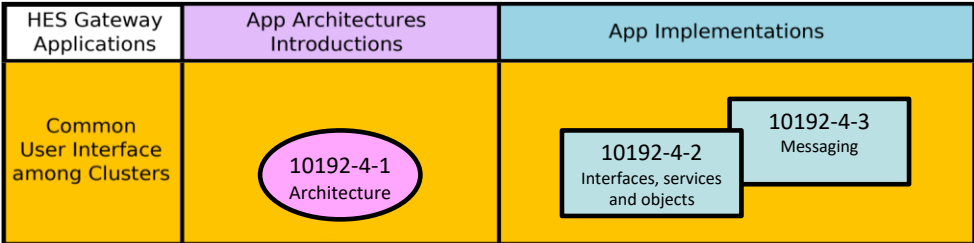


Figure 2 – HES gateway applications standards