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Information technology – Home electronic system (HES) architecture – Part 3-3: User process for network based control of HES Class 1

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INFORMATION TECHNOLOGY - HOME ELECTRONIC SYSTEM (HES) ARCHITECTURE –

Part 3-3: User process for network based control of HES Class 1

FOREWORD

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International Standard ISO/IEC 14543-3-3 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This International Standard is a product family standard. It is not intended to be used as a stand-alone standard.

This International Standard has been approved by vote of the member bodies, and the voting results may be obtained from the address given on the title page.

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

INTRODUCTION

The application interface layer is the layer between the application layer and the application. It contains the communication relevant tasks of the application. It eases the communication task of the application by offering a communication interface that abstracts from many application layer details.

This International Standard allows single-processor and dual-processor device designs. A dual processor device uses additional services to communicate via a serial External Message Interface with the external user application running in the second processor.

The following clauses specify the client and server functioning and the communication interface of the internal user application located in the Bus Access Unit (BAU).

The application interface layer contains the following objects and the access routines to them.

- **Group objects:** these can be accessed via Transport layer Service Access Points (TSAPs) on multicast communication services; see the corresponding clause in ISO/IEC 14543-3-2. Group objects may also be references to interface objects.
- **Interface objects:** these can be accessed via application services on point-to-point connectionless and point-to-point connection-oriented communication modes. The interface objects are divided into system interface objects and application interface objects.
 - System interface objects are
 - the device object,
 - the group address table object,
 - the association table object, and
 - the application object.
 - System interface objects are relevant for network management as specified in ISO/IEC 14543-3-4.
 - Application interface objects are objects defined in the user application. They may be defined by the internal or external user application, based on interface object structure rules defined in this document. Application interface objects may also be referenced by a group object reference.

The following clauses specify the data structures of each of the application interface layer objects. Additionally, they define by which application services these objects are accessible. Both the object client and object server functioning may be implemented by the external or the internal application interface layer. It is recommended to locate the group communication objects, the interface objects and the resource objects in the internal application interface layer.

Currently, ISO/IEC 14543, *Information technology – Home Electronic System (HES) architecture*, consists of the following parts:

- Part 2-1: *Introduction and device modularity*
- Part 3-1: *Communication layers – Application layer for network based control of HES Class 1*
- Part 3-2: *Communication layers – Transport, network and general parts of data link layer for network based control of HES Class 1*
- Part 3-3: *User process for network based control of HES Class 1*
- Part 3-4: *System management – Management procedures for network based control of HES Class 1*
- Part 3-5: *Media and media dependent layers – Power line for network based control of HES Class 1*
- Part 3-6: *Media and media dependent layers – Twisted pair for network based control of HES Class 1*
- Part 3-7: *Media and media dependent layers – Radio frequency for network based control of HES Class 1*
- Part 4: *Home and building automation in a mixed-use building (technical report)*
- Part 5-1: *Intelligent grouping and resource sharing for HES Class 2 and Class 3 – Core protocol (under consideration)*
- Part 5-2: *Intelligent grouping and resource sharing for HES Class 2 and Class 3 – Device certification (under consideration)*

Additional parts may be added later.

INFORMATION TECHNOLOGY – HOME ELECTRONIC SYSTEM (HES) ARCHITECTURE –

Part 3-3: User process for network based control of HES Class 1

1 Scope

This part of ISO/IEC 14543 specifies the structure and functioning of servers for the objects which form the interface between the application layer and the application and management.

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.

ISO/IEC 14543-3-1, *Information technology – Home Electronic System (HES) architecture – Part 3-1: Communication layers – Application layer for network based control of HES Class 1*

ISO/IEC 14543-3-4, *Information technology – Home Electronic System (HES) architecture – Part 3-4: System Management – Management procedures for network based control of HES Class 1*