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Information technology – Home electronic system (HES) architecture – Part 4-1: Communication layers – Application layer for network enhanced control devices of HES Class 1

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INFORMATION TECHNOLOGY – HOME ELECTRONIC SYSTEM (HES) ARCHITECTURE –

Part 4-1: Communication layers – Application layer for network enhanced control devices of HES Class 1

FOREWORD

1) ISO (International Organization for Standardization) and IEC (International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards. Their preparation is entrusted to technical committees; any ISO and IEC member body interested in the subject dealt with may participate in this preparatory work. International governmental and non-governmental organizations liaising with ISO and IEC also participate in this preparation.

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International Standard ISO/IEC 14543-4-1 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

The list of all currently available parts of the ISO/IEC 14543 series, under the general title *Information technology – Home electronic system (HES) architecture*, can be found on the IEC web site.

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 second title page.

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

INTRODUCTION

This part of ISO/IEC 14543 specifies the services and protocol of the application layer for usage in Home Electronic System. Some services are targeted to field level communication between devices. Other services are exclusively reserved for management purposes. Some services can be used for both management and run-time communication. This part of ISO/IEC 14543 is based on ECHONET [1].

ISO/IEC 14543 *Information technology – Home Electronic System (HES) architecture,* currently consists of 14 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 – Powerline 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 4-1: *Communication layers – Application layer for network enhanced control devices of HES Class 1 (this standard)*

Part 4-2: *Communication layers – Transport, network and general parts of data link layer for network enhanced control devices of HES Class 1*

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 are under preparation.

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1 Echonet TM is the trade name of a product supplied by ECHONET Consortium. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC or ISO of the product named. Equivalent products may be used if they can be shown lo lead to the same results.

INFORMATION TECHNOLOGY – HOME ELECTRONIC SYSTEM (HES) ARCHITECTURE –

Part 4-1: Communication layers – Application layer for network enhanced control devices of HES Class 1

1 Scope

This part of ISO/IEC 14543 specifies the services and protocol of the application layer for usage in network enhanced home electronic system Class 1. It provides the services and the interface to the user process. This procedure is based on the services and the protocol is provided by the transport layer, network layer and data link layer as specified in ISO/IEC 14543-4-2.

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 14543-2-1, *Information technology – Home electronic system (HES) architecture – Part 2-1: Introduction and device modularity*

ISO/IEC 14543-4-2, *Information technology – Home electronic system (HES) architecture – Part 4-2: Communication layers – Transport, network and general parts of data link layer for network enhanced control devices of HES Class 1*