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Information technology – Home electronic system (HES) architecture – Part 5-4: Intelligent grouping and resource sharing for HES Class 2 and Class 3 – Device validation

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INFORMATION TECHNOLOGY – HOME ELECTRONIC SYSTEM (HES) ARCHITECTURE –

Part 5-4: Intelligent grouping and resource sharing for HES Class 2 and Class 3 – Device validation

FOREWORD

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2) In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

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International Standard ISO/IEC 14543-5-4 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This International Standard has to be read in conjunction with ISO/IEC 14543-5-1.

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

ISO/IEC 14543-5, *Information technology – Home electronic system (HES) architecture – Part 5: Intelligent grouping and resource sharing (IGRS)* consists of the following parts:

- **Part 5-1: Core protocol**
  - Specifies the TCP/IP protocol stack as the basis and the HTTP protocol as the message-exchanging framework among devices.
  - Specifies a series of device and service interaction/invocation standards, including device and service discovery protocol, device and service description, service invocation, security mechanisms, etc.
  - Specifies core protocols for a type of home network that supports streaming media and other high-speed data transport within a home.
- **Part 5-2#: Application profiles**
  - Based on the IGRS Core Protocol.
  - Defines a device and service interaction mechanism, as well as application interfaces used in IGRS Basic Applications.
  - Multiple application profiles have been developed, including:
    - **Part 5-21: AV profile** (under consideration)
    - **Part 5-22: File profile** (under consideration)
  - Additional application profiles are planned (part numbers to be assigned)
    - **Part 5-2w: DVD profile**
    - **Part 5-2x: QoS profile**
    - **Part 5-2y: DMCP profile**
    - **Part 5-2z: Universal control profile**
- **Part 5-3: Basic application** (under consideration)
  - Includes an IGRS basic application list.
  - Defines a basic application framework.
  - Specifies addresses, operation details (device grouping, service description template, etc.), function definitions, and service invocation interfaces.
- **Part 5-4: Device validation**
  - Defines a standard method to confirm that a decive is IGRS-compliant.
- **Part 5-5: Device types** (under consideration)
  - Defines IGRS Device types used in IGRS applications.
- **Part 5-6: Service types** (under consideration)
  - Defines basic service types used in IGRS applications.

INFORMATION TECHNOLOGY – HOME ELECTRONIC SYSTEM (HES) ARCHITECTURE –

Part 5-4: Intelligent grouping and resource sharing for HES Class 2 and Class 3 – Device validation

1 Scope

This part of ISO/IEC 14543 specifies device validation methods for information devices that implement ISO/IEC 14543-5-1. It defines an architecture framework for a device validation system used by test devices and devices under test. Also, it describes and specifies the device interaction process, message exchange requirements and conformance rules.

This part of ISO/IEC 14543 is applicable to resource sharing and service collaboration among computers, consumer electronics, and communication devices in a Local Area Network (LAN) or Personal Area Network (PAN) environment, especially in a wireless dynamic network.

2 Normative reference

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 14543-5-1, *Information technology – Home electronic system (HES) architecture – Part 5-1: Intelligent grouping and resource sharing for HES Class 2 and Class 3 – Core protocol*

3 Terms, definitions, abbreviations and conventions

3.1 Terms and definitions

For the purposes of this document the following terms and definitions apply. These terms are commonly used in other industry publications.

3.2
centralised device group
set of IGRS devices with one IGRS device acting as the master

NOTE 1 The master is responsible for managing the setup, for dismissing a device group, and for processing a joint request from other devices.

NOTE 2 The master device and other IGRS devices in such a device group form a centralised or master-slave relationship.

3.3
client identifier
unique identifier associated with a client on an IGRS device to which this client belongs

3.4
device group
multiple IGRS devices that are organised into a logical group through the device group management mechanism specified in ISO/IEC 14543-5-1