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

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CONTENTS

FOREWORD.....	4
INTRODUCTION	6
1 Scope.....	7
2 Normative reference	7
3 Terms, definitions and abbreviations.....	7
3.1 Terms and definitions	7
3.2 Abbreviations.....	9
4 Conformance: IGRS device validation.....	9
4.1 Purpose	9
4.2 Conformance requirements	9
4.3 Test setup and method	9
4.4 Device validation requirements.....	10
5 IGRS test suite overview	10
5.1 Test suite structure	10
5.2 Test suite description	11
5.2.1 IGRS device grouping test suite.....	11
5.2.2 IGRS resource sharing test suite	11
5.2.3 Test suite description rules	11
6 IGRS conformance test suite	12
6.1 Device advertisement conformance test suite.....	12
6.1.1 Reference messages.....	12
6.1.2 Test case suite	12
6.2 Device pipe conformance test suite.....	15
6.2.1 Reference messages.....	15
6.2.2 Unsecure device pipe conformance test suite.....	16
6.2.3 Secure device pipe setup based on symmetric-key authentication and message authentication mechanism conformance test suite	19
6.2.4 Secure device pipe setup based on symmetric-key authentication, encrypted message transmission and authentication mechanism conformance test suite.....	25
6.2.5 Secure device pipe setup based on authentication, encrypted message transmission and authentication mechanism of public-key cryptosystem conformance test suite.....	32
6.2.6 Secure device pipe setup based on trusted third party authentication, encrypted message transmission and authentication mechanism conformance test suite.....	39
6.2.7 Secure device pipe setup confirmation conformance test suite.....	45
6.2.8 Secure device pipe teardown conformance test suite	47
6.2.9 Device online detection conformance test suite	47
6.3 Device description document retrieval conformance test suite.....	50
6.3.1 Reference messages.....	50
6.3.2 Test case suite	50
6.4 Device group setup conformance test suite.....	53
6.4.1 Reference messages.....	53
6.4.2 Test case suite	54
6.5 Device search conformance test suite	60
6.5.1 Reference messages.....	60

6.5.2	Test case suite	60
6.6	Device online/offline event subscription conformance test suite	69
6.6.1	Reference messages	69
6.6.2	Test case suite	69
6.7	Device group search conformance test suite	73
6.7.1	Reference messages	73
6.7.2	Test case suite	74
6.8	Service advertisement conformance test suite	79
6.8.1	Reference messages	79
6.8.2	Test case suite	79
6.9	Service search conformance test suite	81
6.9.1	Reference messages	81
6.9.2	Test case suite	82
6.10	Service online/offline event subscription conformance test suite	91
6.10.1	Reference messages	91
6.10.2	Test case suite	91
6.11	Service description document retrieval conformance test suite	95
6.11.1	Reference messages	95
6.11.2	Test case suite	96
6.12	Session conformance test suite	100
6.12.1	Reference messages	100
6.12.2	Common session setup test case suite	100
6.12.3	Session setup when the service access control in a centralised device group is not consistent with device pipe security attribute test case suite	106
6.13	Service invocation conformance test suite	113
6.13.1	Reference messages	113
6.13.2	Test case suite	113
Figure 1 – IGRS conformance test setup		10
Figure 2 – IGRS conformance test suite structure		11

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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 device 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*