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INTERNATIONAL STANDARD

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Information technology – Home network resource management – Part 2: Architecture

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INFORMATION TECHNOLOGY – HOME NETWORK RESOURCE MANAGEMENT –

Part 2: Architecture

FOREWORD

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International Standard ISO/IEC 30100-2 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

A list of all currently available parts of the ISO/IEC 30100 series, published under the general title *Information technology – Home network resource management,* can be found on the IEC website.

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.

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INTRODUCTION

The ISO/IEC 30100 series of standards specifies an abstract model for remote management of home networks conforming to the Home Electronic System (HES) architecture specified in ISO/IEC 14543-2-1. HES consists of a collection of devices that are able to interwork via a common internal network. In a home environment several HESs may operate concurrently, each with separate control and management methods. The Home resource management architecture allows uniform fault processing, diagnostics and configuration management of HES elements in a home environment.

The ISO/IEC 30100 series specifies the home network resource managment architecture and an information model for various home network elements. The information model specifies the minimum requirements of the functionalities that shall be provided by each HES entity. It is specified by the XML-based schema provided in Clause 7. The information consists of the mandatory and optional attributes including user-defined attributes. The user-defined attributes are used for a proprietary purpose or to define attributes that are not specified in the information model. In this part, the information model is specified to cover the physical space, device, network and service information. This information model can be easily extended to accommodate new types of information including user-defined attributes. These functionalities are required to accommodate changes with minimal uploads and restructuring.

Currently, ISO/IEC 30100, *Information technology – Interconnection of information technology equipment –Home Network Resource Management*, consists of the following parts:

Part 1: Requirements

Part 2: Architecture

Part 3: Management application

ISO/IEC 30100 is applicable to:

- a management server located at a home network service provider that manages home networks;
- an apartment complex server, located in an office at the apartment complex;
- a home residential gateway or set top box (STB).

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INFORMATION TECHNOLOGY – HOME NETWORK RESOURCE MANAGEMENT –

Part 2: Architecture

1 Scope

This part of ISO/IEC 30100 specifies the general information model and architecture for managing the resources in a home network. Home network resources are managed objects that provide home network services. Essential home resources include device, network and service resources.

The objectives of this standard are to

- define terminology that describes logical resources of devices, networks and services in a home area network;
- specify the logical information model for describing relations among resources;
- describe the basic logical functional procedures of home area networks (e.g., remote maintenance, auto-configuration and fault processing).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 7498-1, *Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model*

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

ISO/IEC 15944-8, *Information technology – Business Operational View – Part 8: Identification of privacy protection requirements as external constraints on business transactions*

ISO/IEC 18012 (all parts), *Information technology – Home electronic system (HES) – Guidelines for product interoperability*

ISO/IEC 18012-2:2012, *Information technology – Interconnection of information technology equipment – Home Electronic System (HES) – Guidelines for product interoperability – Part 2: Taxonomy and Lexicon*

ISO/IEC 27000, *Information technology – Security techniques – Information security management systems – Overview and vocabulary*

ISO/IEC 27001, *Information technology – Security techniques – Information security management systems – Requirements*

ISO/IEC 27002, *Information technology – Security techniques – Code of practice for information security management*

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ISO/IEC 27003, *Information technology – Security techniques – Information security management system implementation guidance*

ISO/IEC 27004, *Information technology – Information security management – Measurement*

ISO/IEC 27005, *Information technology – Security techniques – Information security risk management*

ISO/IEC 27006, *Information technology – Security techniques – Requirements for bodies providing audit and certification of information security management systems*

ISO/IEC 27007, *Information technology – Security techniques – Guidelines for information security management systems auditing*

ISO/IEC TR 27008, *Information technology – Security techniques – Guidelines for auditors on information security controls*

ISO/IEC 27009, *Information technology – Security techniques – Sector-specific application of ISO/IEC 27001 – Requirements*[1]

ISO/IEC 27010, *Information technology – Security techniques – Information security management system implementation guidance*

ISO/IEC 27011, *Information technology – Security techniques – Information security management guidelines for telecommunications organizations based on ISO/IEC 27002*

ISO/IEC 30100-1:2016, *Information technology – Home network resource management – Part 1: Requirements*

[1] To be published.