IEC 62608-1

Edition 1.0 2014-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Multimedia home network configuration – Basic reference model – Part 1: System model

Configuration de réseau domestique multimédia – Modèle de référence de base – Partie 1: Modèle de système

IEC 62608-1:2014-03(en-fr)

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FOREWORD

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International Standard IEC 62608-1 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this standard is based on the following documents:

CDV	Report on voting
100/2111/CDV	100/2183/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

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

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

As well as electronic power, network connectivity is necessary in order to use electronic devices at home. Some applications running on the devices do not work without an inside and outside network.

When a device connects to a home network, an appropriate network service needs to already be in place. Since network connections are a precondition of many applications, such as IEC 62481-1, IEC 62481-2 and IEC 6248-3, a digital living network alliance (DLNA) network management function is necessary.

Sometimes applications need to change the configuration of another device, gateway, and so on. Since it is too difficult to change the configuration of a device manually, an automatic configuration mechanism is needed for the home network. IEC 62514 defines the functions of a multimedia home gateway. This standard complements the multimedia home gateway by enabling to establish network connections automatically.

**MULTIMEDIA HOME NETWORK CONFIGURATION –
BASIC REFERENCE MODEL –**

Part 1: System model

1 Scope

This part of IEC 62608 specifies the basic reference model to configure devices connected to a home network with a configuration framework for network applications running on such devices.

This part of IEC 62608 applies to devices that are connected via cables and switched on and that support the IP protocol. The reference model covers inside and outside network connectivity.

This standard specifies the system model and functions that each component should support.

2 Normative reference

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 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
home network
network that connects equipment to be configured in the model

Note 1 to entry: The network is built mainly in a home.

3.2
home gateway
equipment that relays a communication from target equipment to outside the home network

3.3
layer 2
data link layer of the commonly referenced multilayered communication model, open systems interconnection

Note 1 to entry: A description of OSI-layers is given in ISO/IEC 7498-1:1994, Clause 6.

3.4
layer 3
network layer of the commonly referenced multilayered communication model, open systems interconnection

Note 1 to entry: A description of OSI-layers is given in ISO/IEC 7498-1:1994, Clause 6.

3.5
configurator
entity that configures equipment

3.6
configured agent
entity that sends configuration information to the configurator

4 Model

4.1 General

This International Standard defines the configurator that manages configuration information of equipment connected to a home network and the configured agent that is managed by the configurator.

4.2 Configurator

The configurator configures equipment as needed and runs on a home network.

The configurator assumes that all devices are set up on the layer 2 network, i.e. that all devices are cable connected with pieces of network equipment. Based on the environment, the configurator supports the creation of a layer 3 connection and application running on consumer equipment.

4.3 Configured agent

The configured agent sends configuration information to the configurator and configures equipment requested by the configurator. The configured agent runs on the equipment managed by the configurator.

The configured agent specifies the procedure needed to establish the connection with the configurator on the layer 2 network. As soon as the connection is established, the configured agent operates as required by the configurator. The function of the configured agent consists of collecting information from the devices, changing the device configuration, and so on.

4.4 System model

Figure 1 shows the system model of the configurator and configured agent.

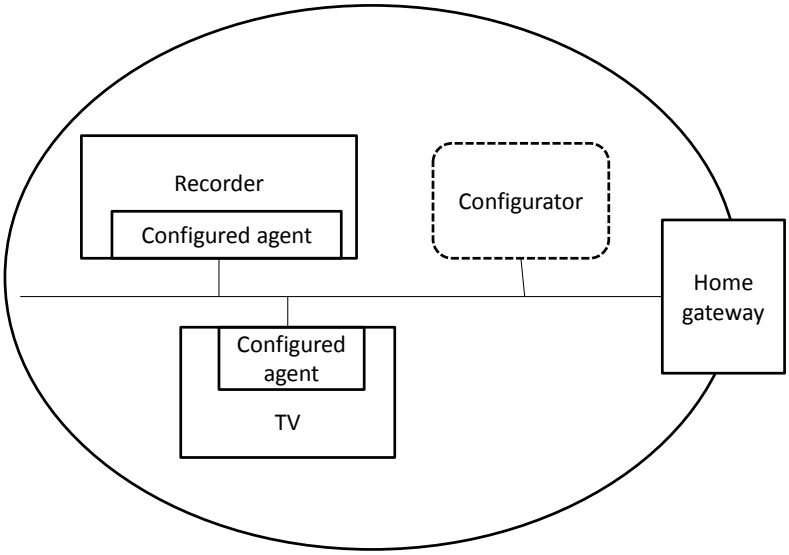

Figure 1 – Configurator system model

4.5 Configuration model

The configurator obtains the configuration information from the configured agent running on each equipment and requests it to configure as needed. The configurator also requests configurations to the home gateway. Figure 2 shows how the configurator obtains information and the configuration request model.

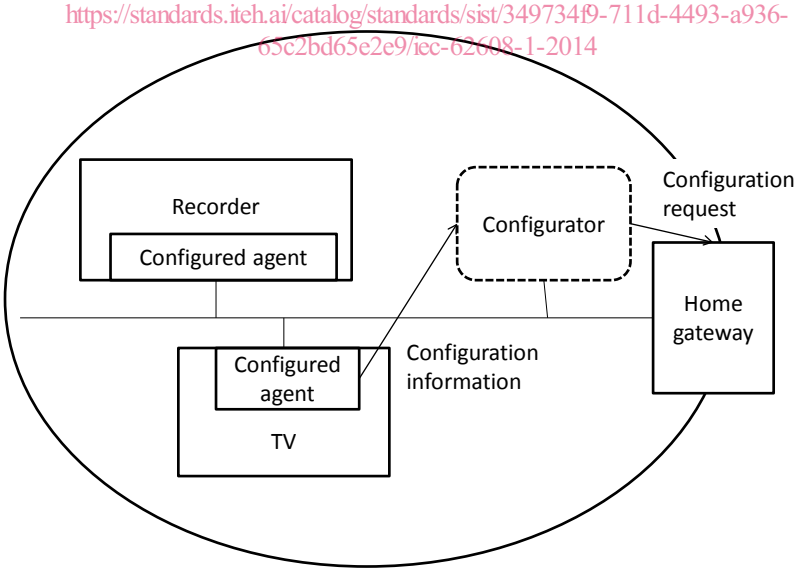

Figure 2 – Information and configuration request model of the configurator

5 Network configuration framework

5.1 Configuration protocol

A protocol is required in order to communicate between the configurator the configured agent and the home gateway. A protocol specification will be defined in IEC 62608-2[1].

5.2 Configuration data model and metadata

A data model and metadata are required in order to construct the configured agent by the configurator. The specification of data model and metadata will be described in IEC 62608-3[1].

1 Under consideration.