TTC標準
Standard

JJ-300.01
The List of Device Categories

Version 2.1

Established on June 5, 2018

THE TELECOMMUNICATION TECHNOLOGY COMMITTEE

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Table of Contents

<Reference>

1. Relation with international standards

None

2. Related TTC standards

JJ-300.00, “Home-network Topology Identifying Protocol (HTIP)” Version 3.0, May 25, 2017

3. Industrial property right

None

4. Revision history

Version	Date	Description
1.0	November 16, 2010	Established
1.1	September 6, 2011	▸ A typo in section 5 has been corrected. (A “Table 3” has been corrected to “Table 5”.) ▸ The version number of a referenced document listed in section 2 of <Reference> has been modified from 1.0 to 1.1.
2.0	August 27, 2015	▸ “Protocol group” has been added as a new Major category name of Device categories to indicate the protocol supported by the device.
2.1	June 5, 2018	▸ Two of the device category values in Table 5 have been corrected. (“LIFE_Blind” to “LIFE_WindowShade”, “LIFE_Hoover” to “LIFE_VacuumCleaner”)

5. Working group developing this standard

Version 1.0: TTC Next-generation Home Network System Working Group

Version 1.1: TTC Next-generation Home Network System Working Group

Version 2.0: TTC Next-generation Home Network System Working Group

Version 2.1: TTC IoT Area Network Working Group

1. Purpose of This Document

In home networks (hereafter abbreviated as home NW), network-connectable devices are increasing these days. In addition, services are spreading which connect devices directly to the Internet or let devices on a home NW communicate with one another through the home NW. For example, there is a service that can use another communication to control the power supply of devices. If a home NW contains two or more devices on which the same service can be provided, however, the user must securely specify only the device that is to be controlled. The user will be able to select a target device on a home NW from those on which the same service can be provided, by presenting its category information to the home NW.

This document formalizes the categories of devices on a home NW, and defines a unique category value for each device category. If a device can let other devices know its category, this formalized device category information makes it easier for not only the user but also applications to use services. For example, an application can show the user the user-friendly icons of devices on a home NW using the device category information received from other devices. This improves in convenience for using home network services.

2. References (Non-standard Documents)

[1] Digital TV Information Research Group

"Home Network CE Specifications for Networked Digital TV", March 2008.

3. Scope of This Document

This document applies to devices mainly on a home NW, such as home electric appliances and personal computers.

4. Use Cases

This section presents two use cases in which device categories are used.

4-1. Selection of a device on a home NW by the user

Let us assume that each device on a home NW can turn on and off its own power supply as directed by other devices. As shown in Figure 4-1, a personal computer (hereafter abbreviated as PC) on a home NW obtains category

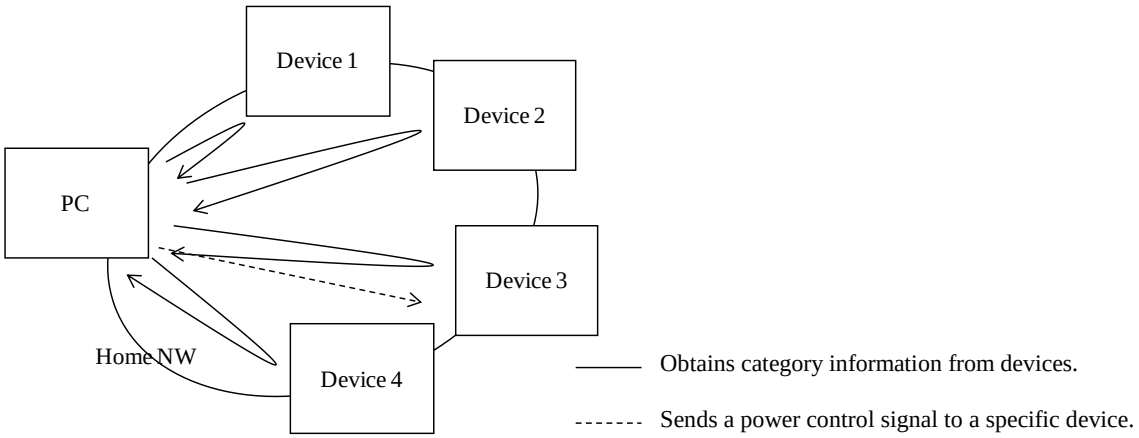

Figure 4-1. Example in which category information is obtained from each device on a home NW

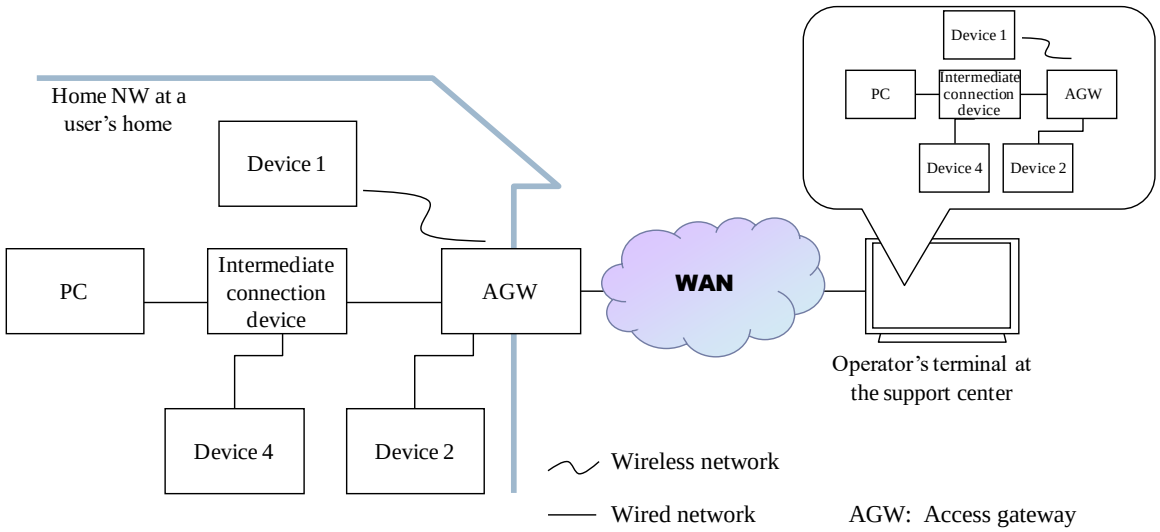

Figure 4-2. Example in which a device on a home NW is identified remotely

information from each device on the home NW, generates icons for the devices, and presents the icons to the user, thus enabling the user to select a specific device easily and to control the power supply of the device easily.

Once a target device has been identified, the user specifies the device on the PC and uses the PC to send, to the device, signals for controlling its power supply.

4-2. Identification of a device on a home NW by an operator at a remote support center

Let us assume that a problem arises with a service provided on a device connected to a home NW and the user asks the support center about what happened. As shown in Figure 4-2, if the remote support center can obtain the category information of the device (connected to the home NW), it is possible to present the icon of the device connected to the home NW to the operator. Using this method enables the operator to identify any malfunctioning device with only a little conversation with the user, hence reducing the time required for interaction.

This way, formalizing the category information of each device can smooth operator-to-user interaction.

5. List of Device Categories

Table 5 lists device categories. The list is based on Digital TV Information Research Group's specification [1]. The list groups devices into major and minor categories and specifies minor category information for each device. Each major category is assigned a unique code used as a device category prefix. The device category prefixes for the AV device group, PC group, communication equipment group (like telephones and intermediate connection equipment), livelihood appliance group (like white goods), and amusement device group (like game machines) are, respectively, "AV_", "PC_", "COM_", "LIFE_", and "AM_". The device prefix for Protocol group is "PROTOCOL_". The device category value to indicate the protocol (like ECHONET Lite) supported by the device must be a string "PROTOCOL_" followed by the characters to identify the protocol name.

One organization can define one's own device category for a device not listed in Table 5. Any independently defined device category must be assigned the prefix "X_" followed by independently defined major and minor category codes. For example, let CAR and Navigation represent, respectively, newly defined major and minor category codes. X_CAR_Navigation will be your own device category value. If you define no major category, you should use a major category code in Table 5. Your new device category value will be an existing major category code followed by the

prefix “X_” and an independently defined minor category code. If you want to define a new device category for recording media (NewmediaRecorder), for example, your new device category value will be AV_X_NewmediaRecorder.

If two or more organizations define their own device categories independently, it is likely that the same character string may be used to represent different devices. To avoid this problem, an independently defined minor category code must be followed by “:” and a suffix that represents the organization that defines the device category. Assume that you are defining a device category for a new AV-group device whose minor category code is NewmediaRecorder and the name of your organization is “kaisha”. Your new device category value will be AV_X_NewmediaRecorder:kaisha. The characters usable in independently defined major category codes, minor category codes, and organization names are listed below. The total length of any extended device category value cannot exceed 64 characters, and each character string used must be understandable to the user.

[a-zA-Z0-9] | [-'()+./:=?;!*#@$_%]

Table 5. Device categories

Major category	Minor category	Explanation	Device category value
AV device group	Net TV set	Television set	AV_TV
	Recorder	VCR, DVD recorder, HD-DVD recorder, BD recorder, HDD recorder	AV_Recorder
	STB	Set-top box	AV_STB
	AV amp	Amplifier	AV_AMP
	Digital camera	Digital camera	AV_DigitalCamera
	Digital video camera	Digital video camera	AV_VideoCamera
	Audio	CD audio, MD audio, portable audio, IC audio	AV_Audio
	Player	Optical disc player	AV_Player
	Projector	Projector	AV_Projector
	Photo frame	Digital photo frame	AV_PhotoFrame
	Others		AV
PC group	Desktop	Desktop PC	PC_DeskTop
	Notebook PC	Notebook PC	PC_Notebook
	Storage	Network storage	PC_NAS
	PDA	PDA	PC_PDA
	Printer	Printer	PC_Printer
	Others		PC
Communication equipment group	Cellular phone	Cellular telephone	COM_Cellular
	IP phone	IP telephone	COM_IPphone
	Router	Broadband router	COM_IGD
	FAX	Facsimile	COM_Facsimile
	Switching hub	Switching hub	COM_Switch
	PLC modem	PLC modem	COM_PLCModem
	Wireless LAN modem	Wireless LAN modem	COM_WirelessModem

	Coaxial-cable modem	Coaxial-cable modem	COM_CoaxModem
	Others		COM
Livelihood appliance group	Air conditioner	Air conditioner	LIFE_AirConditioner
	Refrigerator	Refrigerator, freezer, fridge-freezer	LIFE_Refrigerator
	Washing machine	Washing machine, washer-drier	LIFE_WashingMachine
	Lighting device	Lighting device	LIFE_Lighting
	Microwave oven	Microwave oven, other ovens	LIFE_MicrowaveOven
	Web camera	Web camera	LIFE_WebCamera
	Gateway	Gateway, other controllers	LIFE_Gateway
	Door phone	Door phone	LIFE_Interphone
	Sensor	Sensor of any type	LIFE_Sensor
	Ventilation fan	Ventilation fan	LIFE_Ventilator
	Window blind	Electrical window blind	LIFE_WindowShade
	Roll-up door	Electrical roll-up door	LIFE_Shutter
	Weather door	Electrical weather door	LIFE_SlidingDoor
	Sprinkler	Sprinkler	LIFE_Sprinkler
	Water heater	Water heaters, instantaneous water heater	LIFE_WaterHeater
	Toilet seat	Electrical toilet seat	LIFE_ToiletSeat
	Electrical lock	Electrical lock	LIFE_ElectricKey
	Solar power generation device	Solar power generation device	LIFE_SolarPower
	Floor heating system	Floor heating system	LIFE_FloorHeating
	Pot	Electrical pot	LIFE_Pot
	IH cooking device	IH cooking device	LIFE_InductionHeating
	Rice cooker	Rice cooker, rice cooker-thermos	LIFE_RiceCooker
	Vacuum cleaner	Vacuum cleaner	LIFE_VacuumCleaner
	Others		LIFE
Amusement device group	Stationary game machine	Stationary game machine	AM_GameMachine
	Portable game machine	Portable game machine	AM_PortableGameMachine
	Home robot	Robot	AM_HomeRobot
	Others		AM
Protocol group	ECHONET Lite	ECHONET Lite	PROTOCOL_EchonetLite
	SNMP	SNMP	PROTOCOL_Snmp
	Others	When the protocol name is “protocolname”, the device category value must be described as indicated in the right column of this table.	PROTOCL_Protocolname
Others			MISC