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Part 26-13:

Telephony device control protocol — Level 2 — Phone management service

Technologies de l'information — Architecture de dispositif UPnP — Partie 26-13: Protocole de contrôle de dispositif de téléphonie — Niveau 2 — Service de gestion du téléphone





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#### **CONTENTS**

1	Scop	Scopeiv					
2	Normative references						
3	Term	Terms, definitions, symbols and abbreviated terms					
4	Nota	Notations and conventions					
	4.1	Notation					
		4.1.1	Data Types				
	4.2	Vendo	or-defined Extensions				
5	ConfigurationManagement Service Profile						
	5.1 Service Type						
	5.2	Phone	eManagement Architecture	4			
		5.2.1	Phone Management	5			
		5.2.2	Phone Data Model	5			
	5.3	State \	Variables	6			
	5.4	Actions		7			
		5.4.1	Introduction	7			
		5.4.2	<u>GetSelectedValues()</u>	8			
		5.4.3	<u>SetValues()</u>	8			
		5.4.4	<u>CreateInstance()</u>	8			
		5.4.5	<u>DeleteInstance()</u>	9			
		5.4.6	<u>SetAttributes()</u>	9			
6	XML	Service	e Description	9			
An	nex A	(norma	tive) Phone Data Model	10			
Anı	nex B	(inform	ative) Theory of Operation	57			
Anı	nex C	(inform	ative) Bibliography	71			
Fig	ure 1	— <u>Phor</u>	neManagement via CMS and Phone Data Model	4			
_			verview of the <i>Phone Data Model</i>				
•							
Tal	ole 1 -	– State	Variables for Eventing	7			
			ns				
			e Phone Data Model				

#### Foreword

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For an explanation on the voluntary nature of Standard, the meaning of the ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword – Supplementary information

ISO/IEC 29341-26-13 was prepared by UPnP Forum and adopted, under the PAS procedure, by joint technical committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

The list of all currently available parts of ISO/IEC 29341 series, under the general title *Information technology — UPnP Device Architecture*, can be found on the ISO web site.

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#### **Original UPnP Document**

Reference may be made in this document to original UPnP documents. These references are retained in order to maintain consistency between the specifications as published by ISO/IEC and by UPnP Implementers Corporation and later by UPnP Forum. The following table indicates the original UPnP document titles and the corresponding part of ISO/IEC 29341:

UPnP Document Title	ISO/IEC 29341 Part
UPnP Device Architecture 1.0	ISO/IEC 29341-1:2008
UPnP Device Architecture Version 1.0	ISO/IEC 29341-1:2011
UPnP Device Architecture 1.1	ISO/IEC 29341-1-1:2011
UPnP Device Architecture 2.0	ISO/IEC 29341-1-2
UPnP Basic:1 Device	ISO/IEC 29341-2
UPnP AV Architecture:1	ISO/IEC 29341-3-1:2008
UPnP AV Architecture:1	ISO/IEC 29341-3-1:2011
UPnP AVTransport:1 Service	ISO/IEC 29341-3-10
UPnP ConnectionManager:1 Service	ISO/IEC 29341-3-11
UPnP ContentDirectory:1 Service	ISO/IEC 29341-3-12
UPnP RenderingControl:1 Service	ISO/IEC 29341-3-13
UPnP MediaRenderer:1 Device	ISO/IEC 29341-3-2
UPnP MediaRenderer:2 Device	ISO/IEC 29341-3-2:2011
UPnP MediaServer:1 Device	ISO/IEC 29341-3-3
UPnP AVTransport:2 Service	ISO/IEC 29341-4-10:2008
UPnP AVTransport:2 Service	ISO/IEC 29341-4-10:2011
UPnP ConnectionManager:2 Service	ISO/IEC 29341-4-11:2008
UPnP ConnectionManager:2 Service	ISO/IEC 29341-4-11:2011
UPnP ContentDirectory:2 Service	ISO/IEC 29341-4-12
UPnP RenderingControl:2 Service	ISO/IEC 29341-4-13:2008
UPnP RenderingControl:2 Service	ISO/IEC 29341-4-13:2011
UPnP ScheduledRecording:1	ISO/IEC 29341-4-14
UPnP ScheduledRecording:2	ISO/IEC 29341-4-14:2011
UPnP MediaRenderer:2 Device	ISO/IEC 29341-4-2
UPnP MediaServer:2 Device	ISO/IEC 29341-4-3
UPnP AV Datastructure Template:1	ISO/IEC 29341-4-4:2008
UPnP AV Datastructure Template:1	ISO/IEC 29341-4-4:2011
UPnP DigitalSecurityCamera:1 Device	ISO/IEC 29341-5-1
UPnP DigitalSecurityCameraMotionImage:1 Service	ISO/IEC 29341-5-10
UPnP DigitalSecurityCameraSettings:1 Service	ISO/IEC 29341-5-11
UPnP DigitalSecurityCameraStillImage:1 Service	ISO/IEC 29341-5-12
UPnP HVAC_System:1 Device	ISO/IEC 29341-6-1
UPnP ControlValve:1 Service	ISO/IEC 29341-6-10
UPnP HVAC_FanOperatingMode:1 Service	ISO/IEC 29341-6-11
UPnP FanSpeed:1 Service	ISO/IEC 29341-6-12
UPnP HouseStatus:1 Service	ISO/IEC 29341-6-13
UPnP HVAC_SetpointSchedule:1 Service	ISO/IEC 29341-6-14
UPnP TemperatureSensor:1 Service	ISO/IEC 29341-6-15
UPnP TemperatureSetpoint:1 Service	ISO/IEC 29341-6-16

UPnP HVAC_UserOperatingMode:1 Service	ISO/IEC 29341-6-17
UPnP HVAC_ZoneThermostat:1 Device	ISO/IEC 29341-6-17
UPnP BinaryLight:1 Device	ISO/IEC 29341-7-1
UPnP Dimming:1 Service	ISO/IEC 29341-7-10
UPnP SwitchPower:1 Service	ISO/IEC 29341-7-11
UPnP DimmableLight:1 Device	ISO/IEC 29341-7-2
UPnP InternetGatewayDevice:1 Device	ISO/IEC 29341-8-1
UPnP LANHostConfigManagement:1 Service	ISO/IEC 29341-8-10
UPnP Layer3Forwarding:1 Service	ISO/IEC 29341-8-11
UPnP LinkAuthentication:1 Service	ISO/IEC 29341-8-12
UPnP RadiusClient:1 Service	ISO/IEC 29341-8-13
UPnP WANCableLinkConfig:1 Service	ISO/IEC 29341-8-14
UPnP WANCommonInterfaceConfig:1 Service	ISO/IEC 29341-8-15
UPnP WANDSLLinkConfig:1 Service	ISO/IEC 29341-8-16
UPnP WANEthernetLinkConfig:1 Service	ISO/IEC 29341-8-17
UPnP WANIPConnection:1 Service	ISO/IEC 29341-8-18
UPnP WANPOTSLinkConfig:1 Service	ISO/IEC 29341-8-19
UPnP LANDevice:1 Device	ISO/IEC 29341-8-2
UPnP WANPPPConnection:1 Service	ISO/IEC 29341-8-20
UPnP WLANConfiguration:1 Service	ISO/IEC 29341-8-21
UPnP WANDevice:1 Device	ISO/IEC 29341-8-3
UPnP WANConnectionDevice:1 Device	ISO/IEC 29341-8-4
UPnP WLANAccessPointDevice:1 Device	ISO/IEC 29341-8-5
UPnP Printer:1 Device	ISO/IEC 29341-9-1
UPnP ExternalActivity:1 Service	ISO/IEC 29341-9-10
UPnP Feeder:1.0 Service	ISO/IEC 29341-9-10
UPnP PrintBasic:1 Service	ISO/IEC 29341-9-11
UPnP Scan:1 Service	ISO/IEC 29341-9-12
UPnP Scanner:1.0 Device	ISO/IEC 29341-9-13
UPnP QoS Architecture:1.0	ISO/IEC 29341-9-2
UPnP QosDevice:1 Service	ISO/IEC 29341-10-10
	ISO/IEC 29341-10-10
UPnP QosManager:1 Service	ISO/IEC 29341-10-11
UPnP QosPolicyHolder:1 Service UPnP QoS Architecture:2	ISO/IEC 29341-10-12
UPnP QosDevice:2 Service	ISO/IEC 29341-11-10
	ISO/IEC 29341-11-10
UPnP QosManager:2 Service	ISO/IEC 29341-11-11
UPnP QosPolicyHolder:2 Service UPnP QOS v2 Schema Files	
	ISO/IEC 29341-11-2 ISO/IEC 29341-12-1
UPnP RemoteUIClientDevice:1 Device	
UPnP RemoteUIClient:1 Service	ISO/IEC 29341-12-10
UPnP RemoteUIServerPovice	ISO/IEC 29341-12-11
UPnP RemoteUIServerDevice:1 Device	ISO/IEC 29341-12-2
UPnP DeviceSecurity:1 Service	ISO/IEC 29341-13-10
UPnP SecurityConsole:1 Service	ISO/IEC 29341-13-11
UPnP ContentDirectory:3 Service	ISO/IEC 29341-14-12:2011
UPnP MediaServer:3 Device	ISO/IEC 29341-14-3:2011

UPnP ContentSync:1	ISO/IEC 29341-15-10:2011
UPnP Low Power Architecture:1	ISO/IEC 29341-16-1:2011
UPnP LowPowerProxy:1 Service	ISO/IEC 29341-16-10:2011
UPnP LowPowerDevice:1 Service	ISO/IEC 29341-16-11:2011
UPnP QoS Architecture:3	ISO/IEC 29341-17-1:2011
UPnP QosDevice:3 Service	ISO/IEC 29341-17-10:2011
UPnP QosManager:3 Service	ISO/IEC 29341-17-11:2011
UPnP QosPolicyHolder:3 Service	ISO/IEC 29341-17-12:2011
UPnP QosDevice:3 Addendum	ISO/IEC 29341-17-13:2011
UPnP RemoteAccessArchitecture:1	ISO/IEC 29341-18-1:2011
UPnP InboundConnectionConfig:1 Service	ISO/IEC 29341-18-10:2011
UPnP RADAConfig:1 Service	ISO/IEC 29341-18-11:2011
UPnP RADASync:1 Service	ISO/IEC 29341-18-12:2011
UPnP RATAConfig:1 Service	ISO/IEC 29341-18-13:2011
UPnP RAClient:1 Device	ISO/IEC 29341-18-2:2011
UPnP RAServer:1 Device	ISO/IEC 29341-18-3:2011
UPnP RADiscoveryAgent:1 Device	ISO/IEC 29341-18-4:2011
UPnP SolarProtectionBlind:1 Device	ISO/IEC 29341-19-1:2011
UPnP TwoWayMotionMotor:1 Service	ISO/IEC 29341-19-10:2011
UPnP AV Architecture:2	ISO/IEC 29341-20-1
UPnP AVTransport:3 Service	ISO/IEC 29341-20-10
UPnP ConnectionManager:3 Service	ISO/IEC 29341-20-11
UPnP ContentDirectory:4 Device	ISO/IEC 29341-20-12
UPnP RenderingControl:3 Service	ISO/IEC 29341-20-12
UPnP ScheduledRecording:2 Service	ISO/IEC 29341-20-14
UPnP MediaRenderer:3 Service	ISO/IEC 29341-20-14
UPnP MediaServer:4 Device	ISO/IEC 29341-20-3
UPnP AV Datastructure Template:1	ISO/IEC 29341-20-4
UPnP InternetGatewayDevice:2 Device	ISO/IEC 29341-20-4
UPnP WANIPConnection:2 Service	ISO/IEC 29341-24-10
UPnP WANIPv6FirewallControl:1 Service	ISO/IEC 29341-24-10
UPnP WANConnectionDevice:2 Service	ISO/IEC 29341-24-11
UPnP WANDevice:2 Device	ISO/IEC 29341-24-3
UPnP Telephony Architecture:2	ISO/IEC 29341-24-3
UPnP CallManagement:2 Service	ISO/IEC 29341-26-10
UPnP MediaManagement:2 Service	ISO/IEC 29341-26-11
UPnP Messaging:2 Service	ISO/IEC 29341-26-11
	ISO/IEC 29341-26-13
UPnP PhoneManagement:2 Service UPnP AddressBook:1 Service	ISO/IEC 29341-26-14
UPnP Calendar:1 Service	ISO/IEC 29341-26-14
UPnP Presense:1 Service	ISO/IEC 29341-26-16
	ISO/IEC 29341-26-10
UPnP TelephonyClient:2 Device	
UPnP TelephonyServer:2 Device	ISO/IEC 29341-26-3 ISO/IEC 29341-27-1
UPnP Friendly Info Update:1 Service UPnP MultiScreen MultiScreen Architecture:1	
UPnP MultiScreen Application Management:1 Service	ISO/IEC 29341-28-1
or in municoreen application management. I service	ISO/IEC 29341-28-10

UPnP MultiScreen Screen:1 Device	ISO/IEC 29341-28-2
UPnP MultiScreen Application Management:2 Service	ISO/IEC 29341-29-10
UPnP MultiScreen Screen:2 Device	ISO/IEC 29341-29-2
UPnP IoT Management and Control Architecture Overview:1	ISO/IEC 29341-30-1
UPnP DataStore:1 Service	ISO/IEC 29341-30-10
UPnP IoT Management and Control Data Model:1 Service	ISO/IEC 29341-30-11
UPnP IoT Management and Control Transport Generic:1	
Service	ISO/IEC 29341-30-12
UPnP IoT Management and Control:1 Device	ISO/IEC 29341-30-2
UPnP Energy Management:1 Service	ISO/IEC 29341-31-1

#### 1 Scope

This document specifies the <u>PhoneManagement</u> profile of the <u>ConfigurationManagement</u> Service defined in [7].

The <u>PhoneManagement</u> profile can be used for managing the configuration of the UPnP <u>TelephonyServer</u> device (i.e. a telephone), with tasks such as managing an address book, configuring the settings of the phone, configuring the ringing modes, checking the battery level of the phone. This profile is compliant with the UPnP Telephony Architecture defined in [9].

#### PhoneManagement defines

- A profile of the CMS in order to satisfy the requirements for <u>PhoneManagement</u> (see clause 5).
- The *Phone Data Model* to perform configuration management of the specific features of a phone (see Annex A) by reusing the CMS data model (see [7], Annex B).

The <u>ConfigurationManagement</u> service offers a general purpose data model and a set of configuration management operations for retrieving and managing the actual configuration parameters of a device. These features are completely reused from CMS in the <u>PhoneManagement</u>.

The <u>ConfigurationManagement</u> service defines the functions for manipulating the configuration and status parameters that are exposed by the device hosting the <u>ConfigurationManagement</u> service. These actions and state variables defined in the <u>ConfigurationManagement</u> service are reused in order to manage the configuration parameters of a <u>TelephonyServer</u> device for e.g. phone, defined in the data model of the <u>PhoneManagement</u>.

The main goal of this specification is to define the data model (called herein as *Phone Data Model*) for the <u>TelephonyServer</u> device like Phone, according to the rules defined by the <u>ConfigurationManagement</u> service for defining a new data model.

The *Phone Data Model* is organized as a hierarchical tree of parameter sets, where each set represent a feature of a <u>TelephonyServer</u> (e.g. address book, ringing modes etc) that can be managed by a TelCP.

#### 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.

- [1] UPnP Device Architecture, version 1.0, UPnP Forum, October 15, 2008. Available at: http://www.upnp.org/specs/arch/UPnP-arch-DeviceArchitecture-v1.0-20081015.pdf. Latest version available at: http://www.upnp.org/specs/arch/UPnP-arch-DeviceArchitecture-v1.0.pdf.
- [2] Data elements and interchange formats Information interchange -- Representation of dates and times, International Standards Organization, December 21, 2000. Available at: ISO 8601:2000.

- [3] IETF RFC 2119, Key words for use in RFCs to Indicate Requirement Levels, S. Bradner, 1997. Available at: http://www.faqs.org/rfcs/rfc2119.html.
- [4] IETF RFC 3339, Date and Time on the Internet: Timestamps, G. Klyne, Clearswift Corporation, C. Newman, Sun Microsystems, July 2002. Available at: http://www.ietf.org/rfc/rfc3339.txt.
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- [6] XML Schema Part 2: Data Types, Second Edition, Paul V. Biron, Ashok Malhotra, W3C Recommendation, 28 October 2004. Available at: http://www.w3.org/TR/2004/REC-xmlschema-2-20041028.
- [7] ConfigurationManagement:1 Service, UPnP Forum, July 5, 2010. Available at: http://www.upnp.org/specs/dm/UPnP-dm-ConfigurationManagement-v1-Service.pdf. Latest version available at: http://www.upnp.org/specs/dm/UPnP-dm-ConfigurationManagement-Service.pdf.
- [8] IETF RFC 2426, vCard MIME Directory Profile, F. Dawson, Lotus Development Corporation, T. Howes, Netscape Communications, September 1998. Available at: http://www.ietf.org/rfc/rfc2426.txt.