
ScreenDevice:1 Device

For UPnP Version 1.0

Status: Standardized DCP (SDCP)

Date: September 30, 2014

Service Template Version 3.0

This Standardized DCP has been adopted as a Standardized DCP by the Steering Committee of the UPnP Forum, pursuant to Section 2.1(c)(v) of the UPnP Forum Membership Agreement. UPnP Forum Members have rights and licenses defined by Section 3 of the UPnP Forum Membership Agreement to use and reproduce the Standardized DCP in UPnP Compliant Devices. All such use is subject to all of the provisions of the UPnP Forum Membership Agreement.

THE UPNP FORUM TAKES NO POSITION AS TO WHETHER ANY INTELLECTUAL PROPERTY RIGHTS EXIST IN THE STANDARDIZED DCPS. THE STANDARDIZED DCPS ARE PROVIDED "AS IS" AND "WITH ALL FAULTS". THE UPNP™ FORUM MAKES NO WARRANTIES, EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE STANDARDIZED DCPS, INCLUDING BUT NOT LIMITED TO ALL IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE, OF REASONABLE CARE OR WORKMANLIKE EFFORT, OR RESULTS OR OF LACK OF NEGLIGENCE.

© 2014, UPnP Forum. All rights Reserved.

Authors	Company
Clarke Stevens	CableLabs
Wouter van der Beek	Cisco Systems Inc.
Seung R. Yang (Chair)	LG Electronics
Anders Klemets	Microsoft
Nicholas Frame	TP Vision

Note: The UPnP Forum in no way guarantees the accuracy or completeness of this author list and in no way implies any rights for or support from those members listed. This list is not the specifications' contributor list that is kept on the UPnP Forum's website.

© 2014, UPnP Forum. All rights Reserved.

CONTENTS

1	Scope.....	2
2	Normative references.....	2
3	Terms, definitions, symbols and abbreviations.....	2
4	Notations and Conventions.....	3
5	Device Definitions.....	3
5.1	Device Type.....	3
5.2	Device Model.....	3
5.2.1	Description of Device Requirements.....	3
6	XML Device Description.....	3
	Table 1 — Device Requirements.....	3

1 Scope

This document defines a device type referred to as ScreenDevice version 1. This device specification is compliant with UPnP Device Architecture 1.0 [1].

The ScreenDevice provides various interactive services with other display device(s) which is (are) implemented with Screen Control Point(s). It is designed to be controlled by and interact with Screen Control Point(s). See the Multi-Screen Architecture:1 [2] for details.

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] – *Multi-Screen Architecture:1*, UPnP Forum, September 30, 2014.

Available at: <http://www.upnp.org/specs/ms/UPnP-ms-MultiScreenArchitecture-v1-20140930.pdf>.

Latest version available at: <http://www.upnp.org/specs/ms/UPnP-ms-MultiScreenArchitecture-v1.pdf>.

[3] – *ApplicationManagement:1*, UPnP Forum, September 30, 2014.

Available at: <http://www.upnp.org/specs/ms/UPnP-ms-ApplicationManagement-v1-Service-20140930.pdf>.

Latest version available at: <http://www.upnp.org/specs/ms/UPnP-ms-ApplicationManagement-v1-Service.pdf>.

[4] – *DeviceProtection:1*, UPnP Forum, December 31, 2010.

Available at: <http://www.upnp.org/specs/gw/UPnP-gw-DeviceProtection-v1-Service-20110224.pdf>.

Latest version available at: <http://www.upnp.org/specs/gw/UPnP-gw-DeviceProtection-v1-Service.pdf>.

3 Terms, definitions, symbols and abbreviations

For the purposes of this document, the terms and definitions given in the UPnP Device Architecture:1 [1], the Multi-Screen Architecture:1 [2], and the ApplicationManagement:1 [3].

4 Notations and Conventions

See the Multi-Screen Architecture:1 [2].

5 Device Definitions

5.1 Device Type

The following device type identifies a device that is compliant with this specification:

[urn:schemas-upnp-org:device:ScreenDevice:1](#)

5.2 Device Model

ScreenDevice products shall implement minimum version numbers of all required embedded devices and services specified in the table below. A ScreenDevice may be either a [Root](#) device or may be [Embedded](#) in another UPnP device. A ScreenDevice ([Root](#) or [Embedded](#)) may in turn contain other standard or non-standard [Embedded](#) UPnP devices.

Table 1 — Device Requirements

DeviceType	Root	R/A ^a	ServiceType	R/A ^a	Service ID ^b
ScreenDevice:1	Root or Embedded	R	ApplicationManagement:1	R	ApplicationManagement
			DeviceProtection:1	Q	DeviceProtection
			Standard non Multi-Screen services defined by UPnP (AV, Cloud, etc.) go here.	Q	
			<i>Non-standard services embedded by a UPnP vendor go here.</i>	X	<i>TBD</i>
Standard devices embedded by a UPnP vendor go here	Embedded	Q	Services as defined by the corresponding standard UPnP Device Definition go here		
<i>Non-standard state variables implemented by a UPnP vendor go here</i>	Embedded	X	<i>TBD</i>	<i>TBD</i>	<i>TBD</i>
^a For a device this column indicates whether the state variable shall be implemented or not, where R = required, A = allowed, CR = conditionally required, CA = conditionally allowed, X = Non-standard, add -D when deprecated (e.g., R-D , A-D).					
^b Prefixed by urn:upnp-org:serviceId:					

5.2.1 Description of Device Requirements

Any instance of a ScreenDevice shall have an ApplicationManagement service. For a given instance (ScreenDevice), there shall only be one instance of these services. The DeviceProtection service [4] shall be present if the ApplicationManagement service implements the *SECURITY* feature. Other standard services, such as UPnP AV, Cloud, etc., may be added with semantics defined by the relevant specifications.

The ApplicationManagement service allows control points to manage applications of the ScreenDevices and the communications between applications providing various time-sensitive and interactive services including implementation-specific applications among various display devices.

6 XML Device Description

```
<?xml version="1.0"?>
<root xmlns="urn:schemas-upnp-org:device-1-0">
  <specVersion>
    <major>1</major>
    <minor>0</minor>
  </specVersion>
</root>
```

```

</specVersion>
<URLBase>base URL for all relative URLs</URLBase>
<device>
  <deviceType>
    urn:schemas-upnp-org:device:ScreenDevice:1
  </deviceType>
  <friendlyName>short user-friendly title</friendlyName>
  <manufacturer>manufacturer name</manufacturer>
  <manufacturerURL>URL to manufacturer site</manufacturerURL>
  <modelDescription>long user-friendly title</modelDescription>
  <modelName>model name</modelName>
  <modelName>model name</modelName>
  <modelNumber>model number</modelNumber>
  <modelURL>URL to model site</modelURL>
  <serialNumber>manufacturer's serial number</serialNumber>
  <UDN>uuid:UUID</UDN>
  <UPC>Universal Product Code</UPC>
  <iconList>
    <icon>
      <mimetype>image/format</mimetype>
      <width>horizontal pixels</width>
      <height>vertical pixels</height>
      <depth>color depth</depth>
      <url>URL to icon</url>
    </icon>
    <!--XML to declare other icons, if any, go here-->
  </iconList>
  <serviceList>
    <service>
      <serviceType>
        urn:schemas-upnp-org:service:ApplicationManagement:1
      </serviceType>
      <serviceId>
        urn:upnp-org:serviceId:ApplicationManagement
      </serviceId>
      <SCPDURL>URL to service description</SCPDURL>
      <controlURL>URL for control</controlURL>
      <eventSubURL>URL for eventing</eventSubURL>
    </service>
    <service>
      <serviceType>
        urn:schemas-upnp-org:service:DeviceProtection:1
      </serviceType>
      <serviceId>
        urn:upnp-org:serviceId:DeviceProtection
      </serviceId>
      <SCPDURL>URL to service description</SCPDURL>
      <controlURL>URL for control</controlURL>
      <eventSubURL>URL for eventing</eventSubURL>
    </service>
    <!--Declarations for standard non Multi-Screen services defined by
UPnP (if any) go here-->
    <!--Declarations for other services added by UPnP vendor
(if any) go here-->
  </serviceList>
  <deviceList>
    <!--Description of embedded devices added by UPnP vendor (if any) go
here-->
  </deviceList>
  <presentationURL>URL for presentation</presentationURL>
</device>
</root>

```