DimmableLight:1 Device Template Version 1.01

For UPnP™ Version 1.0
Status: Standardized DCP
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1. Overview and Scope

This device template is compliant with the Universal Plug and Play Architecture, Version 1.0 and Version 1.0 of the UPnP Standard Device Template.

DimmableLight:1 provides the following functionality:

- Switching the light source on or off
- Changing the intensity of the light source in intermediate steps
- Configuring and running ramping operations (optional)
- Providing definition of interaction between SwitchPower and Dimming service

This device template does not address:

- Definition of scheduled activities ("scenarios")

2. Device Definitions

2.1. Device Type

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

urn:**schemas-upnp-org:device**:*DimmableLight:1*

2.2. Device Model

Products that expose devices of the type **urn:schemas-upnp-org:device:***DimmableLight:1* must implement minimum version numbers of all required embedded devices and services specified in the table below.

Table 1: Device Requirements

DeviceType	Root	Req. or Opt.[1]	ServiceType	Req. or Opt.[1]	Service ID[2]
DimmableLight:1	Root	R	SwitchPower:1	R	SwitchPower
			Dimming:1	R	Dimming
			Non-standard services embedded by an UPnP vendor go here.	*X*	*TBD*
Non-standard devices embedded by a UPnP vendor go here.	*TBD*	*X*	*TBD*	*TBD*	*TBD*

[1] R = Required, O = Optional, X = Non-standard.
[2] Prefixed by urn:**upnp-org**:**serviceId**: .

2.2.1. Description of Device Requirements

The SwitchPower:1 service is required exactly once.

The Dimming:1 service is required exactly once.

2.2.2. Relationships Between Services

The optional specifications within the service Dimming:1 regarding "OnEffect" define a relationship between state changes of the service SwitchPower:1 and the Dimming:1. Please refer to the service description of the service Dimming:1 for detailed information.

2.3. Theory of Operation

The lighting control device is comprised of a Switch Power and a Dimming Service. The switching component is serially connected to the dimming component. The dimmer's settings will not be physically realized by the load until the switch is on.

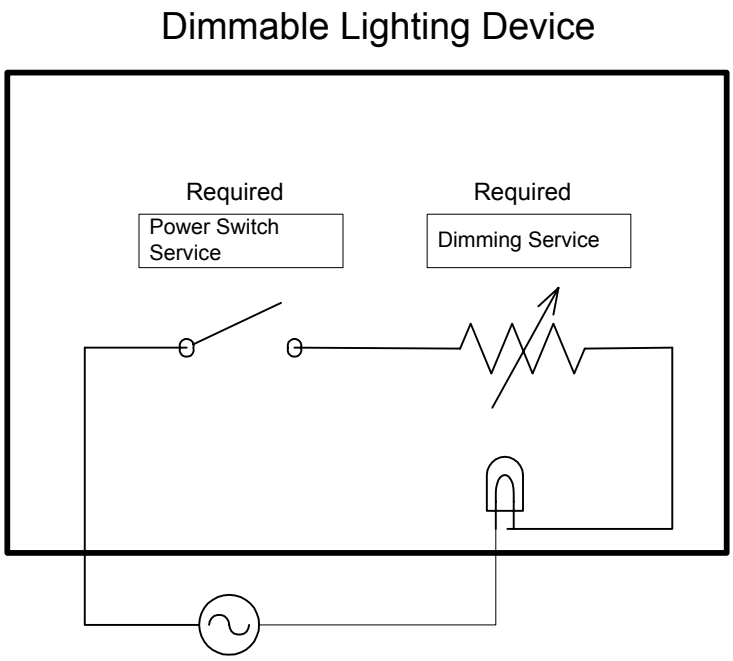

Figure 1: Graphical model of Dimmable Light Controller

The effect of the dimmer when the switch switches from "off" to "on" state is optionally programmable (OnEffect) and is triggered by the Switch Power Service's state. This means if the *Status* of the Switch Power Service switches from 0 to 1 then the OnEffect will be realized on the dimming component.

In OnEffect the default state of the dimming device is set. If *OnEffect* set to OnEffectLevel the *LoadLevelTarget* is set to OnEffectLevel when *Target* is changed to 1.

3. XML Device Description

```
<?xml version="1.0"?>
<root xmlns="urn:schemas-upnp-org:device-1-0">
  <specVersion>
    <major>1</major>
    <minor>0</minor>
  </specVersion>
  <URLBase>base URL for all relative URLs</URLBase>
  <device>
    <deviceType>urn:schemas-upnp-org:device:DimmableLight: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>
    <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: SwitchPower:1</serviceType>
        <serviceId>urn:upnp-org:serviceId: SwitchPower:1</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:Dimming:1</serviceType>
        <serviceId>urn:upnp-org:serviceId:Dimming:1</serviceId>
        <SCPDURL>URL to service description</SCPDURL>
        <controlURL>URL for control</controlURL>
        <eventSubURL>URL for eventing</eventSubURL>
      </service>
      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>
```

4. Test

Testing of the UPnP functions Addressing, Discovery, Description, Control (Syntax) and Eventing are performed by the UPnP Test Tool v1.1 based on the following documents:

- UPnP Device Architecture v1.0
- The Device Definitions in chapter 2 of this document
- The XML Device Description in chapter 3 of this document
- The UPnP Test Tool device template test file: **DimmableLight1.xml**
- The template documents for the services referenced by this device, together with their respective UPnP Test Tool service template test files.