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**Information technology – UPnP device architecture –
Part 14-3: Audio Video Device Control Protocol – Level 3 – Media Server Device**

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INFORMATION TECHNOLOGY – UPNP DEVICE ARCHITECTURE –

Part 14-3: Audio Video Device Control Protocol – Level 3 – Media Server Device

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International Standard ISO/IEC 29341-14-3 was prepared by UPnP Forum Steering committee¹, was adopted, under the fast track procedure, by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

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

This International Standard has been approved by vote of the member bodies, and the voting results may be obtained from the address given on the second title page.

¹ UPnP Forum Steering committee, UPnP Forum, 3855 SW 153rd Drive, Beaverton, Oregon 97006 USA. See also "Introduction".

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1 Overview and Scope

1.1 Introduction

This device specification is compliant with the UPnP™ Device Architecture version 1.0. It defines a device type referred to herein as MediaServer.

The MediaServer specification defines a general-purpose device that can be used to instantiate any Consumer Electronics (CE) device that provides AV content (for example, media) to other UPnP devices on the home network. It is based on the UPnP AV Architecture Framework (described in another document). It exposes its content via the ContentDirectory service (refer to the ContentDirectory service specification for details). The MediaServer MAY also provide functionality to record content using the ScheduledRecording service (refer to the ScheduledRecording service specification). As such, the MediaServer can handle any specific type of media, any data format, and transfer protocol.

Example instances of a MediaServer include traditional devices such as VCRs, CD Players, DVD Players, audio-tape players, still-image cameras, camcorders, radios, TV Tuners, and set-top boxes. Additional examples of a MediaServer also include new digital devices such as MP3 servers, PVRs, and Home MediaServers such as the PC. Although these devices contain diverse (AV) content in one form or another, the MediaServer (via the ContentDirectory service) is able to expose this content to the home network in a uniform and consistent manner. This ability allows the MediaServer to instantiate traditional single-function devices as well as more recent multi-function devices such as VCR-DVD players and the general purpose Home MediaServer, which contains a wide variety of content such as MPEG2 video, CD audio, MP3 and/or WMA audio, JPEG images, etc.

The MediaServer specification is very lightweight and can easily be implemented on low-resource devices such as still-image cameras or MP3 players that want to expose their local content to the home network. The MediaServer can also be used for high-end Home MediaServers that contain dozens of Gigabytes of heterogeneous content. Refer to the Theory Of Operation clause for some specific examples of the MediaServer.

A full-featured MediaServer device provides clients with the following capabilities:

- Enumerate and query any of the content that the MediaServer can provide to the home network.
- Negotiate a common transfer protocol and data format between the MediaServer and target device.
- Control the flow of the content (for example, FF, REW, etc).
- Copy (import) content to the MediaServer from another device.
- Record content using the ScheduledRecording service.

This device specification does not provide:

- The ability to render AV content.

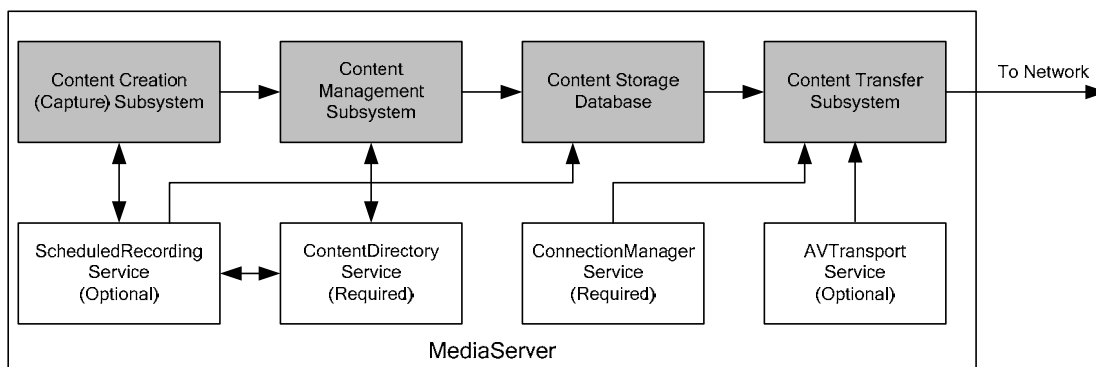


Figure 1 — MediaServer Functional Diagram

The un-shaded blocks represent the UPnP services that are contained by a MediaServer device. The shaded blocks represent various device-specific modules that the UPnP services might interact with. However, the internal architecture of a MediaServer device is vendor specific.