ISO/IEC 29341-4-14

Edition 2.0 2011-09

INTERNATIONAL STANDARD

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Information technology – UPnP device architecture – Part 4-14: Audio Video Device Control Protocol – Level 2 – Scheduled Recording Service

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRICE CODE XF

ICS 35.200

ISBN 978-2-88912-683-5

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INFORMATION TECHNOLOGY – UPNP DEVICE ARCHITECTURE –

Part 4-14: Audio Video Device Control Protocol – Level 2 – Scheduled Recording Service

FOREWORD

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International Standard ISO/IEC 29341-4-14 was prepared by UPnP Forum Steering committee[1], was adopted, under the fast track procedure, by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This International Standard replaces ISO/IEC 29341-4-14, first edition, published in 2008, and constitutes a technical revision.

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.

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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

This service definition is compliant with the UPnP Device Architecture version *1.0*. It defines a service type referred to herein as ScheduledRecording service.

1.1 Introduction

The ScheduledRecording service is a UPnP service that allows control points to schedule the recording of content. Generally, this content is broadcast content, but this specification does not limit itself to broadcast content. This service type enables the following functions:

- Create a *recordSchedule* so that it is added to the list of *recordSchedule* instances. Each *recordSchedule* describes user-level recording instructions for the ScheduledRecording service.
- Browse a list of *recordSchedule* instances stored by the ScheduledRecording service.
- Delete a *recordSchedule* so that it is removed from the list of *recordSchedule* instances.
- Browse a list of *recordTask* instances, stored by the ScheduledRecording service. The ScheduledRecording service may create zero or more *recordTask* instances for each *recordSchedule*. A *recordTask* represents a discrete recording operation of a *recordSchedule*.
- Enable or disable individual *recordTask* instances.
- Enable or disable a *recordSchedule*.
- Receive notifications indicating change of *recordSchedule* or *recordTask* list.

The ScheduledRecording service does not require a dependency on any UPnP services other than a co-located ContentDirectory service, which provides the following functions:

- A ContentDirectory service provides channel line-up to allow users to find recordable channels. A control point may use this metadata when creating a *recordSchedule* on a ScheduledRecording service.
- A ContentDirectory service may provide Electronic Program Guide (EPG) features to allow users to find recordable content. A control point may use this metadata when creating a *recordSchedule* on a ScheduledRecording service.
- Contents recorded by the ScheduledRecording service may be exposed by a ContentDirectory service.

The architectural relationship among the different concepts, defined by the ScheduledRecording service can be summarized as follows: A ScheduledRecording service owns a flat (that is: non-nested) list of *recordSchedule* instances, meaning that the ScheduledRecording service may create, destroy, or change *recordSchedule* instances. A *recordSchedule* represents user-level instructions to perform recording operations. Generally, a user constructs his instructions to a ScheduledRecording service via a control point that invokes UPnP actions that affect the list of *recordSchedule* instances. In all cases, the ScheduledRecording service MUST be able to describe discrete recording operations for a *recordSchedule* through a list of associated *recordTask* instances. A *recordTask* can only exist with a *recordSchedule* (that is: never orphaned). Thus when a *recordTask* is created by the ScheduledRecording service, its lifetime depends on its parent *recordSchedule*. An individual *recordTask* can be selectively enabled or disabled.

This service template does not address:

- Implementations where the ScheduledRecording service and its associated ContentDirectory service are not co-located in the same device.

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