ISO/IEC 29341-26-11:2017-09 (E)

Information technology - UPnP Device Architecture - Part 26-11: Telephony device control protocol - Level 2 - Media management service

Contents

Page

1 Scope v

2 Normative references 1

3 Terms, definitions, symbols and abbreviated terms 2

4 Notations and conventions 4
4.1 Text conventions 4
4.2 Data Types 4
4.3 Vendor-defined Extensions 4

5 Service Modeling Definitions 4
5.1 Service Type 4
5.2 MediaManagement Service Architecture 4
5.3 State Variables 5
5.3.1 State Variable Overview 5
5.3.2 MediaSessionInfo 5
5.3.3 A_ARG_TYPE_MediaSessionID 7
5.3.4 A_ARG_TYPE_MediaCapabilityInfo 7
5.3.5 A_ARG_TYPE_MediaSessionInfoList 8
5.4 Eventing and Moderation 9
5.4.1 Eventing of MediaSessionInfo 9
5.5 Actions 9
5.5.1 GetMediaCapabilities() 9
5.5.2 StartMediaSession() 11
5.5.3 StopMediaSession() 12
5.5.4 ModifyMediaSession() 13
5.5.5 GetMediaSessionInfo() 15
5.5.6 Error Code Summary 16
5.6 Service Behavioral Model 16
5.6.1 State Diagrams 16

6 XML Service Description 17

Annex A (normative) XML Schema 20

Annex B (informative) Theory of Operation 22

Annex C (informative) Sequence Examples 28

Annex D (informative) Bibliography 185

Figure 1 -- Relationship among Media Stream, Media Session and Media Session ID 3

Figure 2 -- Architecture of the MediaManagement Service 5

Figure 3 -- State diagrams of the MediaManagement service 17

Figure B.1 -- Flow basics for creating an outgoing Call 23

Figure B.2 -- Flow basics for accpeting an incoming Call 25

Figure B.3 -- Flow basics for modifying an ongoing Call 27
Figure C.4 -- Create a Call 29
Figure C.5 -- Terminate a Call 44
Figure C.6 -- Reject an incoming Call 49
Figure C.7 -- Cancel an outgoing Call 52
Figure C.8 -- Cancel an outgoing Call (But the specified CallID does not exist.) 55
Figure C.9 -- Cancel an outgoing Call (But the StopCall() action is invoked at invalid timing.) 56
Figure C.10 -- Get MediaSessionInfo and CallInfo during the Call 57
Figure C.11 -- Create an outgoing Call using multiple TCs (Case 1) 61
Figure C.12 -- Create an outgoing Call using multiple TCs (Case 2) 75
Figure C.13 -- Accept an incoming Call using multiple TCs (Case 1) 80
Figure C.14 -- Accept an incoming Call using multiple TCs (Case 2) 92
Figure C.15 -- Add TC during a Call (Create a modification request) 97
Figure C.16 -- Add TC during a Call (Accept a modification request) 106
Figure C.17 -- Remove TC during a Call (Create a modification request) 114
Figure C.18 -- Remove TC during a Call (Accept a modification request) 120
Figure C.19 -- Change TC during a Call 127
Figure C.20 -- Modify Media Session during a Call 136
Figure C.21 -- Initiate a Call 144
Figure C.22 -- Create an outgoing Call (Monopolization Mode Call(PHONE-TelCP)) 147
Figure C.23 -- Terminate a Call (But the specified TelCP is not authorized.) 162
Figure C.24 -- Cancel an outgoing Call (But the specified TelCP is not authorized.) 164
Figure C.25 -- Change TelCP which Monopolize the Call 165
Figure C.26 -- Create a Call with TC-Based and TS-Based Media Handlings 168
Table 1 -- State Variables 5
Table 2 -- Allowed values for mediaSessionStatus 6
Table 3 -- Allowed values for reason and the corresponding status of Media Session 6
Table 4 -- Allowed values for format 7
Table 5 -- Event Moderation 9
Table 6 -- Actions 9
Table 7 -- Arguments for GetMediaCapabilities() 9

Table 8 -- Error Codes for GetMediaCapabilities() 10

Table 9 -- Arguments for StartMediaSession() 11

Table 10 -- Error Codes for StartMediaSession() 12

Table 11 -- Arguments for StopMediaSession() 12

Table 12 -- Error Codes for StopMediaSession() 13

Table 13 -- Arguments for ModifyMediaSession() 13

Table 14 -- Error Codes for ModifyMediaSession() 14

Table 15 -- Arguments for GetMediaSessionInfo() 15

Table 16 -- Error Codes for GetMediaSessionInfo() 15

Table 17 -- Error Code Summary 16