CallManagement:1 Service

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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 the *CallManagement* service.

1.1   Introduction

The *CallManagement* service is a UPnP service that allows control points to use the telephony features(e.g., voice call, video call, and data transfer etc.) provided by a Telephony Server (TS).

The *CallManagement* service enables the following features to a Telephony Control Point (TelCP):

- start an outgoing call

- accept an incoming call

- modify the capability of an existing call (e.g., changing from a voice call to a video call)

- terminate a call

- preview call logs

- register a call back and check the availability of the registered call back

To realize these features, the *CallManagement* service manages the connectivity of calls and media streams.

1.2   Notation

- In this document, features are described as Required, Recommended, or Optional as follows:

  The key words "MUST," "MUST NOT," "REQUIRED," "SHALL," "SHALL NOT," "SHOULD," "SHOULD NOT," "RECOMMENDED," "MAY," and "OPTIONAL" in this specification are to be interpreted as described in [RFC 2119].

  In addition, the following keywords are used in this specification:

  PROHIBITED – The definition or behavior is an absolute prohibition of this specification. Opposite of REQUIRED.

  CONDITIONALLY REQUIRED – The definition or behavior depends on a condition. If the specified condition is met, then the definition or behavior is REQUIRED, otherwise it is PROHIBITED.

  CONDITIONALLY OPTIONAL – The definition or behavior depends on a condition. If the specified condition is met, then the definition or behavior is OPTIONAL, otherwise it is PROHIBITED.

  These keywords are thus capitalized when used to unambiguously specify requirements over protocol and application features and behavior that affect the interoperability and security of implementations. When these words are not capitalized, they are meant in their natural-language sense.

- Strings that are to be taken literally are enclosed in "double quotes".

- Words that are emphasized are printed in *italic*.

- Keywords that are defined by the UPnP Working Committee are printed using the *forum* character style.

- Keywords that are defined by the UPnP Device Architecture are printed using the **arch** character style.

- A double colon delimiter, "::", signifies a hierarchical parent-child (parent::child) relationship between the two objects separated by the double colon. This delimiter is used in multiple contexts, for example: Service::Action(), Action()::Argument, parentProperty::childProperty.

1.2.1 Data Types

This specification uses data type definitions from two different sources. The UPnP Device Architecture defined data types are used to define state variable and action argument data types [DEVICE]. The XML Schema namespace is used to define property data types [XML SCHEMA-2].

For UPnP Device Architecture defined Boolean data types, it is strongly RECOMMENDED to use the value "**0**" for false, and the value "**1**" for true. The values "**true**", "**yes**", "**false**", or "**no**" MAY also be used but are NOT RECOMMENDED. The values "**yes**" and "**no**" are deprecated and MUST NOT be sent out by devices but MUST be accepted on input.

For XML Schema defined Boolean data types, it is strongly RECOMMENDED to use the value "*0*" for false, and the value "*1*" for true. The values "*true*", "*yes*", "*false*", or "*no*" MAY also be used but are NOT RECOMMENDED. The values "*yes*" and "*no*" are deprecated and MUST NOT be sent out by devices but MUST be accepted on input.

1.3 Vendor-defined Extensions

Whenever vendors create additional vendor-defined state variables, actions or properties, their assigned names and XML representation MUST follow the naming conventions and XML rules as specified in [DEVICE], Section 2.5, "Description: Non-standard vendor extensions".

1.4 References

1.4.1 Normative References

This section lists the normative references used in this specification and includes the tag inside square brackets that is used for each such reference:

[DEVICE] – UPnP Device Architecture, version 1.0, UPnP Forum, June 13, 2000.
Available at: http://www.upnp.org/specs/architecture/UPnP-DeviceArchitecture-v1.0-20000613.htm.
Latest version available at: http://www.upnp.org/specs/arch/UPnP-arch-DeviceArchitecture-v1.0.pdf.

[ISO 8601] – Data elements and interchange formats – Information interchange -- Representation of dates and times, International Standards Organization, December 21, 2000.
Available at: ISO 8601:2000.

[RFC 2119] – IETF RFC 2119, Key words for use in RFCs to Indicate Requirement Levels, S. Bradner, 1997.
Available at: http://www.ietf.org/rfc/rfc2119.html.

[RFC 2396] – IETF RFC 2369, Uniform Resource Identifiers (URI): Generic Syntax, T. Berners-Lee, MIT/LCS, R. Fielding, U.C. Irvine, L. Masinter, Xerox Corporation, 1998.
Available at: http://www.ietf.org/rfc/rfc2396.html.

[RFC 3261] – IETF RFC 3261, SIP: Session Initiation Protocol, J. Rosenberg, dynamicsoft, H. Schulzrinne, Columbia U., G. Camarillo, Ericsson, A. Johnston, WorldCom, J. Peterson, Neustar, R. Sparks, dynamicsoft, M. Handley, ICIR, E. Schooler, AT&T, 2002.
Available at: http://www.ietf.org/rfc/rfc3261.html.

[RFC 3339] – IETF RFC 3339, Date and Time on the Internet: Timestamps, G. Klyne, Clearswift Corporation, C. Newman, Sun Microsystems, July 2002.
Available at: http://www.ietf.org/rfc/rfc3339.txt.

[RFC 3966] – IETF RFC 3966, The tel URI for Telephone Numbers , H. Schulzrinne, Columbia University, 2004.
Available at: http://www.ietf.org/rfc/rfc3966.html.

[RFC4566] – IETF RFC 4566, SDP: Session Description Protocol, M. Handley, UCL, V. Jacobson, Packet Design, C. Perkins, University of Glasgow, July 2006.
Available at: http://www.ietf.org/rfc/rfc4566.txt.

[XML] – Extensible Markup Language (XML) 1.0 (Third Edition), François Yergeau, Tim Bray, Jean Paoli, C. M. Sperberg-McQueen, Eve Maler, eds., W3C Recommendation, February 4, 2004.
Available at: http://www.w3.org/TR/2004/REC-xml-20040204.

[XML SCHEMA-2] – XML Schema Part 2: Data Types, Second Edition, Paul V. Biron, Ashok Malhotra, W3C Recommendation, 28 October 2004.
Available at: http://www.w3.org/TR/2004/REC-xmlschema-2-20041028.

[MMS] – *MediaManagement:1*, UPnP Forum, March 22, 2011.
Available at: http://www.upnp.org/specs/ phone/UPnP-phone-MediaManagement-v1-Service-20110322.pdf.
Latest version available at: http://www.upnp.org/specs/phone/UPnP-phone-MediaManagement-v1-Service.pdf.

1.4.2 Informative References

This section lists the informative references that are provided as information in helping understand this specification:

[PHONEARCH] – TelephonyArchitecture:1, UPnP Forum, March 22, 2011.
Available at: http://www.upnp.org/specs/phone/UPnP-phone-TelephonyArchitecture-v1-20110322.pdf.
Latest version available at: http://www.upnp.org/specs/phone/UPnP-phone-TelephonyArchitecture-v1.pdf.

[RFC 3550] – IETF RFC 3550, RTP: A Transport Protocol for Real-Time Applications, H. Schulzrinne, Columbia University, S. Casner, Packet Design, R. Frederick Blue Coat Systems Inc.,V. Jacobson, Packet Design, July 2003.
Available at: http://www.ietf.org/rfc/rfc3550.txt.

[TSBP] – *Telephony Security Best Practice*, UPnP Forum, March 22, 2011.
Available at: http://www.upnp.org/specs/phone/UPnP-phone-TelephonySecurityBestPractice-v1-20110322.pdf.
Latest version available at: http://www.upnp.org/specs/phone/UPnP-phone-TelephonySecurityBestPractice-v1.pdf.

[DP] – *DeviceProtection:1*, UPnP Forum, February 2011.
Available at: http://www.upnp.org/specs/gw/UPnP-gw-DeviceProtection-v1-Service.pdf.
Latest version available at: http://www.upnp.org/specs/gw/UPnP-gw-DeviceProtection-v1-Service.pdf.

2   Service Modeling Definitions (Normative)

2.1   Service Type

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

  urn:schemas-upnp-org:service:*CallManagement:1*

CallManagement service is used herein to refer to this service type.

2.2   Terms and Abbreviations

2.2.1   Abbreviations

Table 2-1:   Abbreviations

Abbreviation	Description
GUI	Graphical User Interface
ID	Identifier
SDP	Session Description Protocol
TC	Telephony Client
TelCP	Telephony Control Point
TS	Telephony Server

2.2.2   Terms

2.2.2.1   Call

A Call is a connection between parties that are communicating with each other. The connection can be for voice, video, or data transmission.

2.2.2.2   CallID

A CallID is the unique identifier of a Call.

2.2.2.3   Call Status

The Call Status indicates the state(e.g., Calling, Ringing, and Talking etc.) of a Call at a particular point of time.

2.2.2.4   Media Stream

A Media Stream is a flow of media (e.g., audio, video, and data etc.) which is sent and/or received between two parties involved in a Call.

2.2.2.5   Media Session

A Media Session is a series of interactions for flow of media among the parties involved in the Call.

2.2.2.6 Media Session ID

A Media Session ID uniquely identifies the Media Session for a Call.

Figure 1 shows the relationship among Media Streams, Media Session and Media Session ID. A Media Session can include multiple Media Streams.
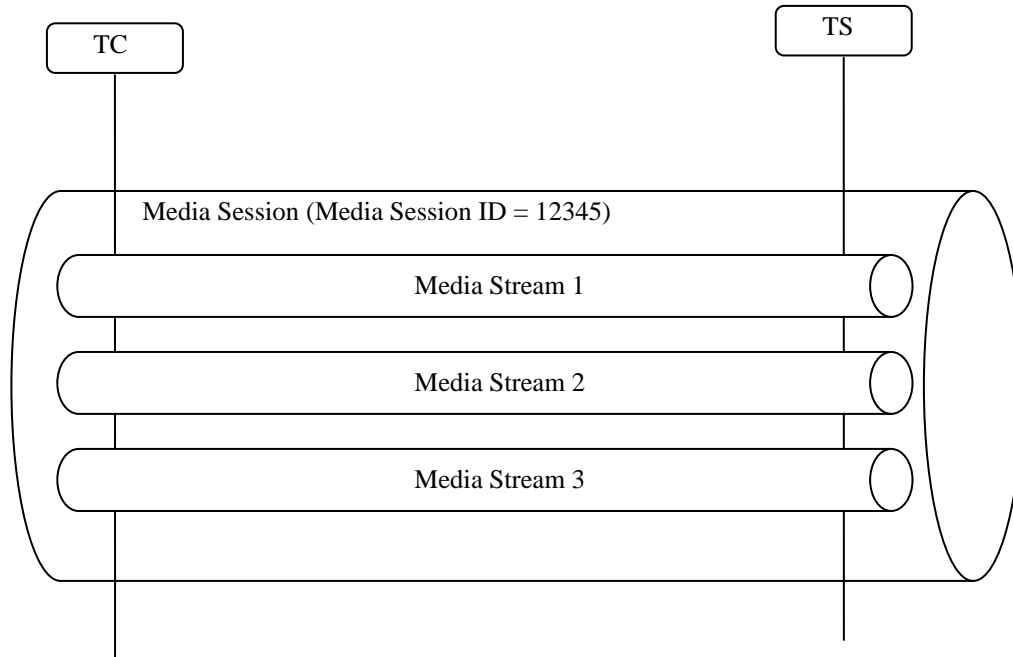
Figure 1: Relationship among Media Stream, Media Session and Media Session ID

2.2.2.7 Media Capability

The Media Capabilities define a set of Media Streams which are sent and/or received in a Media Session. The Media Capabilities include codec types, codec parameters, IP addresses, and port numbers etc. SDP[RFC4566] defines one of the methods to describe Media Capabilities.

2.2.2.8 Caller

A Caller is a terminal which initiates a Call.

2.2.2.9 Callee

A Callee is a terminal which receives a Call.

2.2.2.10 Remote Party

With respect to a Caller, the Remote Party refers to the Callee. And with respect to a Callee, the Remote Party refers to the Caller.

2.2.2.11 Peer

A Peer refers to one of the parcipants in a Call.

2.2.2.12 Monopolize

Monopolize indicates the process for an identity (a TelCP or a user) to obtain the exclusive rights to control a specific Call managed by the *CallManagement* service. When a Call is successfully Monopolized by an identity, the *CallManagement* service only allows this specific identity to manage the Call, until the Call is terminated or this identity hands over the exclusive rights to control the Call to another identity.

2.2.2.13 Monopolizer

A Monopolizer indicates the identity (a TelCP or a user) that currently has the exclusive rights to control a specific Call managed by the *CallManagement* service.

2.2.2.14 Call Monopolization

Call Monopolization indicates the mechanisms that allow an identity (a TelCP or a user) to Monopolize a Call managed by the *CallManagement* service. See Section 2.3.2 in detail.

2.2.2.15 Monopolization Mode Call

A Monopolization Mode Call indicates a Call which is Monopolized.

2.2.2.16 Non-Monopolization Mode Call

A Non-Monopolization Mode Call indicates a Call which is not Monopolized. Therefore, any TelCP can control a Non-Monopolization Mode Call.

2.2.2.17 TelCPName

The TelCPName indicates a unique name for the TelCP.

2.2.2.18 Secret Key

The Secret Key is the unique value assigned to a TelCP. The *CallManagement* service uses the Secret Key to verify whether an authorized TelCP is invoking the action.

2.3 *CallManagement* Service Architecture

This service provides the features for a TelCP to access telephony features that a TS exposes in the UPnP network in order to initiate a Call, accept an incoming Call or receive notifications for incoming Calls, and manage Media Session associated with the Call including starting and stopping the Media Session.

The architecture for the *CallManagement* service is shown in the following figure.
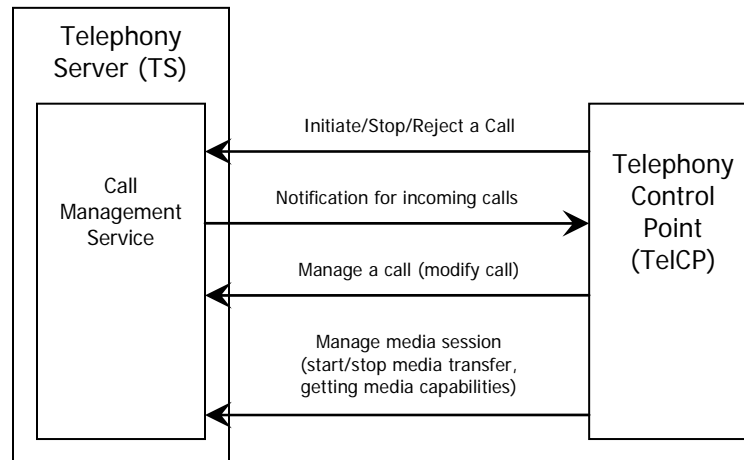
Figure 2: Architecture of the *CallManagement* Service

It is assumed that the TelCP features are implemented in a physical device that provides a Graphical User Interface (GUI), for a user to manage locally the telephony functionalities. These are however out of the scope of the *CallManagemen* service design.

The UPnP device that implements the *CallManagement* service is capable of exposing telephony features to the Peers through some telecommunication means (e.g., PSTN/ISDN, PLMN, and VoIP etc.): The implementation of these telephony features with Peers networks and Peers are out of the scope.

2.3.1 Managing Call With Multiple Telephony Clients

The main components of the telephony architecture are the Telephony Server (TS), Telephony Client (TC), and Telephony Control Point (TelCP). The TS is responsible for interfacing between the Caller or Callee in the wide area network and the TC in the home network. The multiple Call architecture explained in this section considers multiple TCs involve in a telephony Call. When multiple clients in the home network are associated with a Call involving a Callee/Caller in the wide area network, there is a need to share Media Stream among the the clients within the home network so that each client will receive Media Stream from all other clients in addition to the Media Stream from the Callee/Caller in the wide area network. The TS multiplexes Media Streams from multiple TCs in the home network and sends the multiplexed Media Stream to the WAN side.

The Figure below shows two telephony clients are involved in a Call managed by the TS. The assumption here is that the TCs are in different rooms in the home network and are providing media for the Call with a Caller/Callee in the wide area network which gets media from both TC 1 and TC 2, TC 1 and TC 2 also need to get media from each other in order for the users behind them to listen to each other.
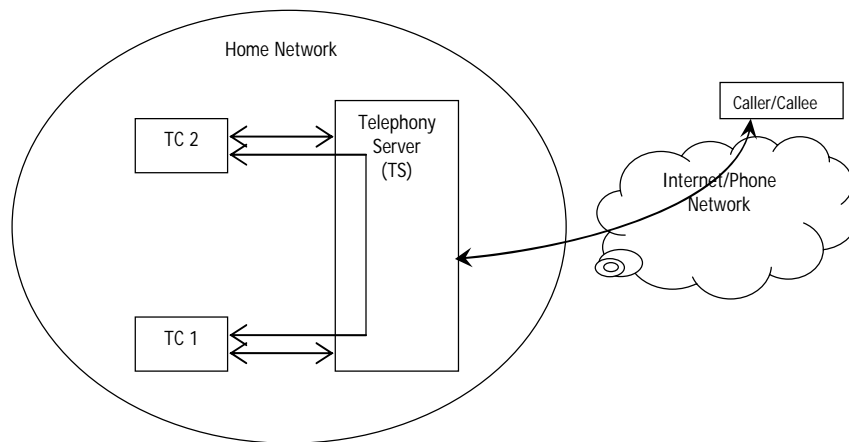
Figure 3: Managing a Telephony Call with Multiple Telephony Clients

There are two different architectures that can manage Calls with multiple telephony clients. These are:

1. The TS must make sure that the Media Streams from all the clients including the Callee/Caller in the wide area network are available to each TC. The TS can realize such a feature by performing the mixer functionality where one or more input Media Streams are combined to produce one or more output streams directed specifically to one or more TC. In another words, the TS multiplexes multiple Media Streams from different TCs involved in the Call and also media from the WAN side and sends the multiplexed Media Streams to the other TC involved in the Call. The architecture for sharing Media Stream among multiple telephony clients follows the star architecture where all the TCs are connected to the centralized TS in a star like fashion. The mixer is a software/hardware component resides inside the TS and is not visible in the UPnP network. Its functionality is to gather media inputs from multiple clients and produce output streams directed to each TC. In this approach, while initiating or accepting a Call, the TelCP can decide whether a TC will receive Media Stream from other TCs and whether it is capable of decoding the media from other clients by examining the Media Capability of the clients involved in the Call. Once the TelCP determines that the TC can receive Media Stream from other TCs, the

TelCP indicates that option to the TS within the parameter of the *StartMediaTransfer (CallID, MediaSessionID, MediaCapabilityInfo)* action. The *A_ARG_TYPE_MediaCapabilityInfo* state variable contains a XML tag that indicates whether the TS should mix media from other clients. The tag is: <enableMediaMixing> 1 </enableMediaMixing>. The value of this XML element is either 1 or 0. Where 1 indicates that that TS must mixe Media Streams from other clients and a value of "0" indicates that the TS must stop mixing media from other TCs. The figures 4 and 5 below show how to use media mixing feature in starting a Call and modifying a Call. Figure 5 shows a scenario where the initial Call was established with only one client TC1. The Call is then modified by adding another client TC2 by invoking the *ModifyCall ()* action and soon after the media mixing capability is enabled on the TS by invoking the *StartMediaTransfer()* action. Once media mixing is enabled, the TS starts sending multiplexed media from to the TCs. The media mixing capability can be disabled or enabled at any time on the TS by invoking the *ModifyCall()* action with the value of the <enableMediaMixing> element set to either "0" or "1" respectively in the *A_ARG_TYPE_MediaCapabilityInfo* input argument.
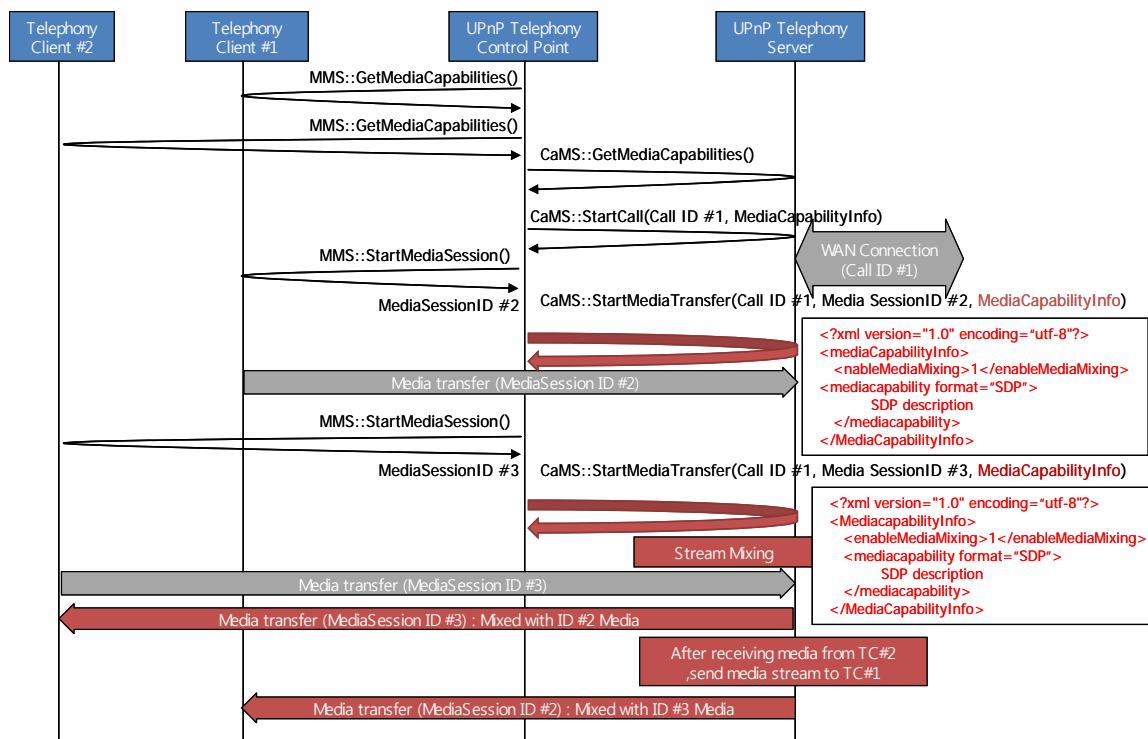
Figure 4: Starting a Call with Multiple Telephony Clients Using Media Mixing Capability
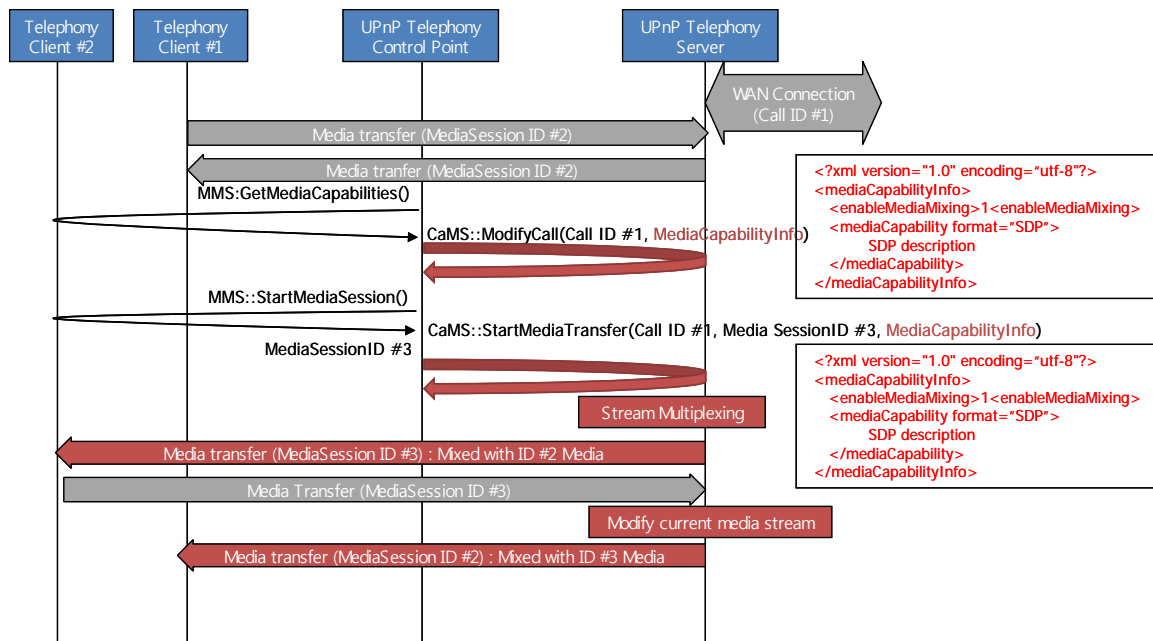
Figure 5: Modifying a Call with Multiple Telephony Clients Using Media Mixing Capability

2. An alternative architecture is to create multiple Media Sessions to share Media Streams among the TCs. The TelCP controls the multiple TCs and the TS in order to create multiple sessions with each TCs. The second architecture requires a TelCP to create multiple Media Sessions. If there are two clients as shown in the Figure below then the TelCP needs to create 4 different Media Sessions (Session 1 is between TC 1 and TS, Session 2 is between TC 2 and TS, Session 3 is between TS and TC 1 to receive media from TC 2, Session 4 is between TS and TC 2 to receive media from TC 1). The TelCP indicates to the TS whether a session is to share media from another TC by use of a XML tag in the *A_ARG_TYPE_MediaCapabilityInfo* for the action *StartMediaTransfer (CallID, MediaSessionID, MediaCapabilityInfo)*. The tag is: <shareMedia> Media Session ID </shareMedia>. The Media Session ID identifies the Media Stream to share in a Media Session with a TC. For example, if there are 2 telephony Clients TC1 and TC2 and the Media Session ID for TC1 and TS is 2, and Media Session ID for TC2 and TS is 3, then to create a new Media Session with Media Session ID 4 between TC 1 and TS to get media from TC2, the element will have the following value: <shareMedia>3 </shareMedia>. Similarly, to create a new Media Session with Media Session ID 5 between TC2 and TS and to get media from TC1, the element value will be: <shareMedia> 2 </shareMedia>. The figures 6 and 7 below show how to use media sharing feature while starting a Call or modifying a Call.
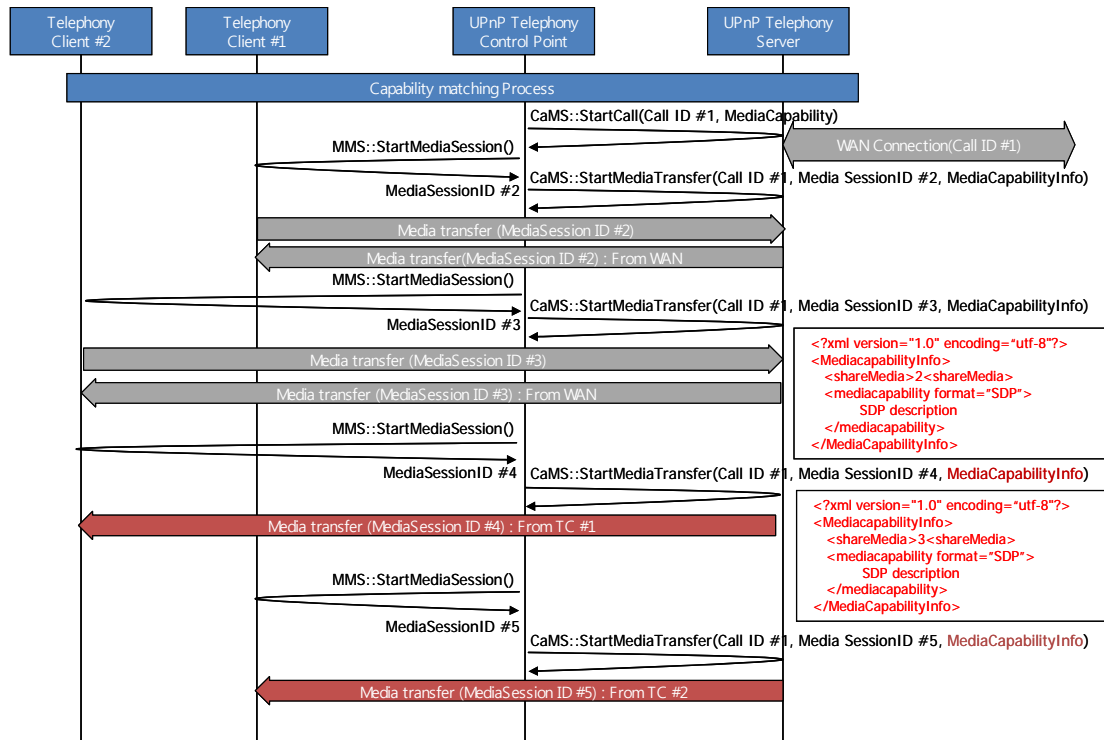
Figure 6: Starting a Call With Multiple Telephony Clients Using Media Sharing Capability
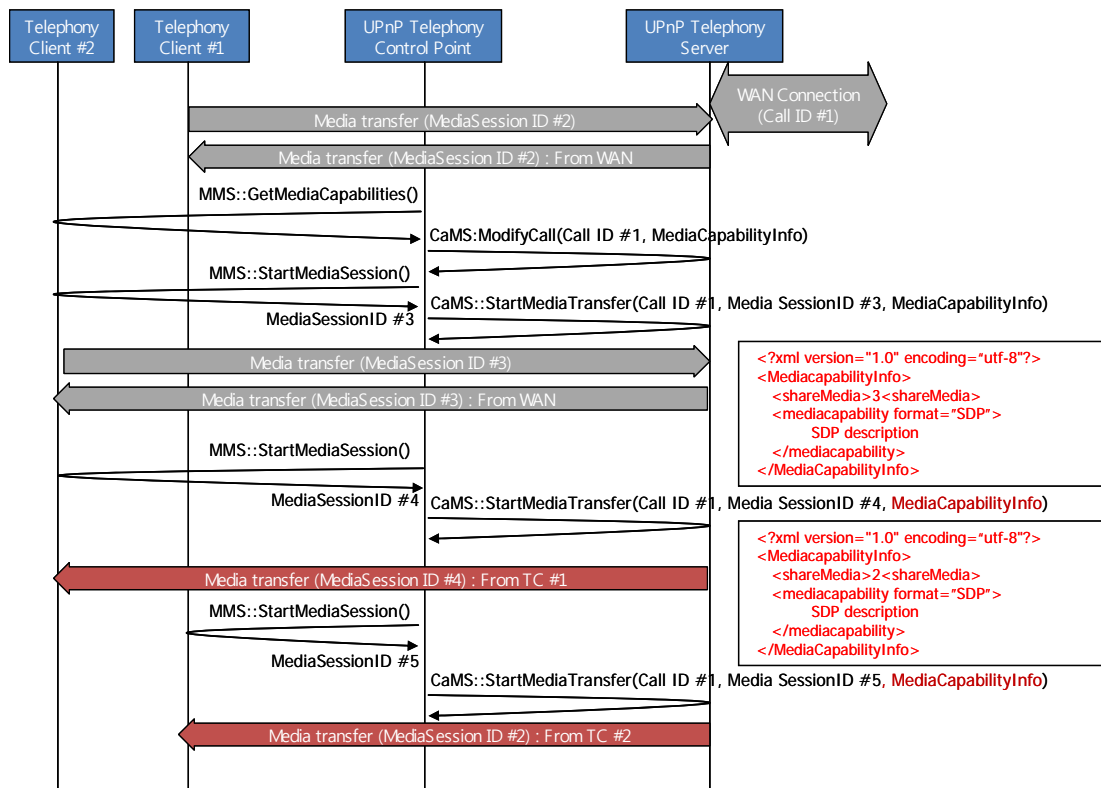
Figure 7: Modifying a Call With Multiple Telephony Clients Using Media Sharing Capability

2.3.2 Call Monopolization

The telephony architecture enables a Telephony Control Point (TelCP) to manage Calls on the Telephony Server (TS). This includes instructing the TS to start an outgoing Call or answer an incoming Call with a Callee in the wide area network, or instructing the TS to modify or terminate an existing Call with the Callee. In practical deployment scenarios, there can be more than one TelCP in the home network (e.g., multiple TVs and PCs in difference rooms that have TelCP functions). The basic UPnP architecture allows any control point to control UPnP devices. However, in some situations, a user may require important Calls (e.g. private Calls) to be managed only by a limited number of TelCPs. For example:

- When a Call on the TS is initiated or accepted by a TelCP which is controlled by a specific user, the user may require this Call to be managed (i.e. modified or terminated) afterwards only by this specific TelCP, or by the user itself by using other TelCPs.

- When the TS receives an incoming Call, the user may require that the Call can only be answered by a specific TelCP or a user (i.e., any attempt to answer this Call by unauthorized TelCP, or by an unauthorized users using a TelCP will fail).

This section addresses the first requirement mentioned above. The term Call Monopolization refers to a mechanism that allows an identity (a TelCP or a user) to manage a Call. Depending on the type of identity (i.e. TelCP or user), the Call Monopolization can be performed at the "TelCP-level" allowing the Call to be managed by a specific TelCP; or at the "User-level" allowing the Call to be managed only by a specific user using any TelCP.

The *CallManagement* service is capable of handling the incoming Calls meeting the second requirement mentioned above. When receiving an incoming Call, the *CallManagement* service determines by its internal policies whether any TelCP or user can answer the Call. If not, the service announces via the evented *CallInfo* state variable which one or more IDs (TelCPNames or usernames) are allowed to answer (accept or reject) the Call. Depending on the type of identity (i.e. a TelCP or a user), the incoming Call can be handled at the "TelCP-level" allowing the incoming Call to be answered by a specific TelCP(s); or at the "User-level" allowing to be answered by a specific user(s) using any TelCP.

There are two mechanisms for Call Monopolization defined in this version of the specification. This section defines the mechanism called "PHONE-based Call Monopolization", targeting only TelCP-level Call Monopolization. When a TS implements the *DeviceProtection* service, this version of the specification defines another mechanism for Call Monopolization which utilizes the *DeviceProtection* service and are defined in the Telephony Security Best Practice [TSBP] document and named as "DP-based Call Monopolization". This mechanism enables both TelCP-level and User-level Call Monopolization.

2.3.2.1 PHONE-based Call Monopolization

The PHONE-based Call Monopolization defines a mechanism for a specific TelCP to Monopolize a Call managed by the *CallManagement* service. The *CallManagement* service defines the *A_ARG_TYPE_TelCPName* state variable, which is used by this service to identify a TelCP. This service also defines the *A_ARG_TYPE_SecretKey* state variable, which is used by this service to verify the TelCP's identity. When a new TelCP starts up, it is required to Call the *RegisterTelCPName()* action defined in this service to register a unique TelCPName for itself. The action returns a Secret Key which is used subsequently by this service to verify the TelCP's identity when the TelCP tries to Monopolize a Call or manage a Monopolization Mode Call. The following figure and text illustrates how the PHONE-based Call Monopolization mechanism enables a TelCP to Monopolize a Call.
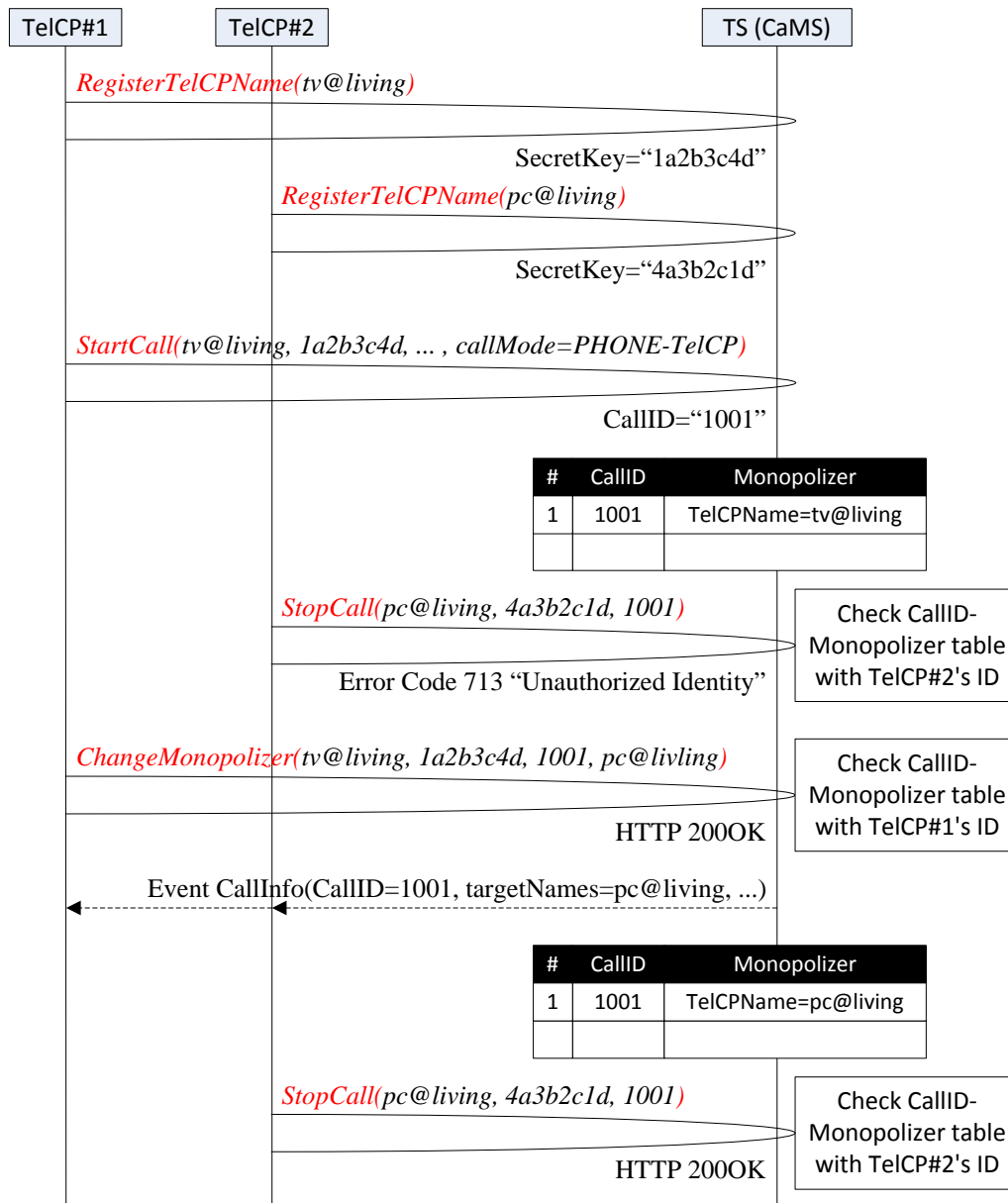
Figure 8: PHONE-based Call Monopolization

1. If a TelCP, e.g., TelCP#1 in the figure above wants to Monopolize a Call managed by the *CallManagement* service, it must first have registered a TelCPName with the service. A new TelCP can invoke the *RegisterTelCPName()* action to register a unique TelCPName. This action will assign a Secret Key for the TelCP.

2. The TelCP#1 can instruct the *CallManagement* service to initiate a Call by invoking the *StartCall()* action. In order to Monopolize this specific Call, the TelCP must invoke the action as follows:

    *   The input arguments *TelCPName* and *SecretKey* of this action must indicate the right values of the TelCP#1's TelCPName and Secret Key, which in this example are "tv@living" and "1a2b3c4d" respectively.

    *   The *CallMode* input argument of this action must also indicate that the Call is to be managed in Monopolized mode by using the "PHONE-TelCP" as its value.

3. The *CallManagement* service verifies the identity of TelCP#1 and if passed, returns the CallID and recognize the TelCP#1 as the current Monopolizer of the Call identified by this CallID. The *CallManagement* service internally maps the CallID with Monopolizer's ID (i.e. TelCP#1's TelCPName).

4. Subsequently, any management action on this Call (e.g., *ModifyCall()* or *StopCall()*) must be checked by the *CallManagement* service to make sure if the action is invoked by the Monopolizer of this Call. For example, in the figure above,

   - TelCP#2 which is not the current Monopolizer of the Call indentified by CallID=1001 is not allowed to stop the Call by the *CallManagement* service (i.e., the *StopCall()* action will be returned with Error Code 713 "Unauthorized Identity".

5. The *CallManagement* service also provides an interface for a Call Monopolizer (i.e. TelCP) to hand over the management rights of the Call to another TelCP.

   - By invoking the *ChangeMonpolizer()* action, the TelCP#1 as the Monopolizer of the Call identified by CallID=1001 hands over the management rights to TelCP#2.

   - The *CallManagement* service checks TelCP#1's identity and also the CallID by checking internal Monopolizer mapping table, if successful, the table will be updated to indicate TelCP#2 as the current Monopolizer of this Call. The service also events the updated *CallInfo* state variable indicating the new Monopolizer of this Call.

   - TelCP#2, as the new Monopolizer, is allowed to manage this Call by the *CallManagement* service, while TelCP#1 is not allowed to manage the Call anymore.

2.3.2.1.1 Incoming Call Handling

When the *CallManagement* service receives an incoming Call, it can decide by its internal policies whether only a subset of TelCP(s) is allowed to answer the Call. Since the registered TelCPName is used to identify a TelCP, the service announces the allowed identities to answer the incoming Call by listing the relevant TelCPNames as the value of <*targetNames*> element in the evented *CallInfo* state variable. Note that the policies itself and the way to configure them are out of the scope of this version of the *CallManagement* service. When a TelCP invokes the *AcceptCall()* or *RejectCall()* action targeting on the Call, the *CallManagement* service will verify the TelCPName and Secret Key of the TelCP to determine if it is allowed to answer the Call. The following figure and text illustrates how the *CallManagement* service handles an incoming Call.
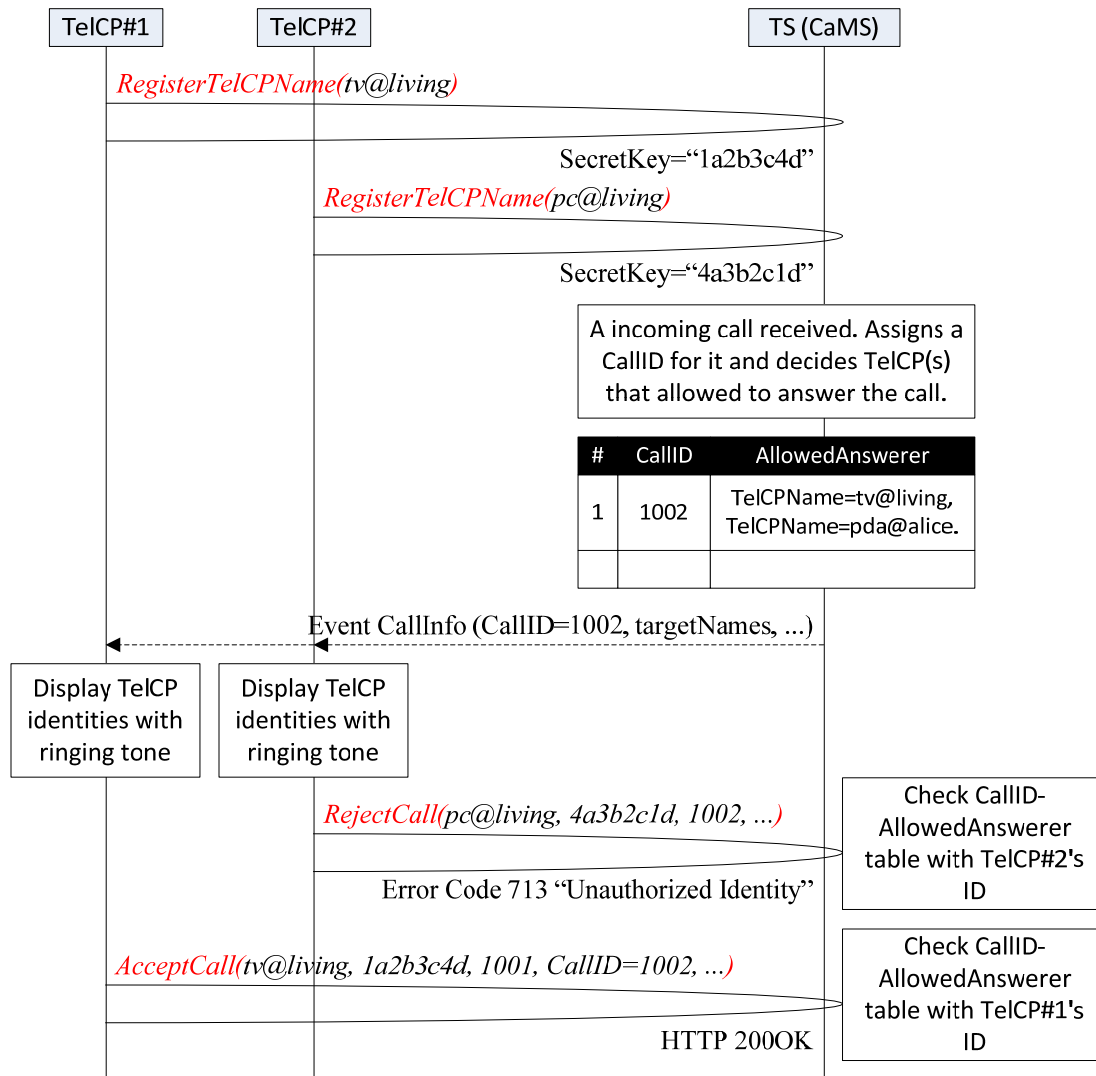
Figure 9: Incoming Call Handling

1. If a TelCP, e.g., TelCP#1 in the figure above wants to become a candidate to answer an incoming Call managed by the *CallManagement* service, it must first have a registered TelCPName in the service. A new TelCP can invoke the *RegisterTelCPName()* action to register a unique TelCPName. The action will assign a Secret Key for the TelCP.

2. When the *CallManagement* service receives an incoming Call, it can decide whether one or more TelCPs are allowed to answer the Call. The service also assigns a unique CallID for this Call. The service internally maps the CallID with the TelCPName that can manage the Call.

3. The *CallManagement* service sends the *CallInfo* state variables of the incoming Call to the TelCPs that had subscribed to the events for this service. The evented *CallInfo* state variable contains the CallID of the Call as well as the TelCPNames of the TelCPs that are allowed to answer the Call.

4. When receiving the *AcceptCall()* or *RejectCall()* action from a TelCP the *CallManagement* service verifies the identity of the TelCP by checking its TelCPName and Secret Key from the input arguments of the action. The service also looks up in the "CallID-AllowedAnswerer" table with the TelCPName to decide if the TelCP is allowed to answer/reject the Call. For example, in the above figure,

- TelCP#2 with "pc@living" as its TelCPName is not one of the allowed TelCP that can answer the incoming Call, thus the action invoked by this TelCP targeting the Call will fail.

- TelCP#1 has its TelCPName "tv@living" in the evented *CallInfo* state variable, thus it will succeed in answering the Call by invoking the *AcceptCall()* action.

2.3.3 Selective Information Delivery

The *CallManagement* service defined in this specification provides features enabling privacy. For example, when a user starts calling with a Callee in the wide area network, he/she may require some information (e.g. the peer ID) of this Call to be unavailable to the other users in the home network. To meet the above requirement, "Selective Information Delivery" mechanism is used by the *CallManagement* service.

The Selective Information Delivery defines a mechanism by which the *CallManagement* service only delivers general information (e.g. Call ID) of a specific Call to the TelCPs, so that privacy related information (e.g. peer ID) are hidden from unauthorized TelCPs or users.

When a Call is managed by the service is Monopolized, or when the service decides that only specific TelCP(s) or User(s) can answer an incoming Call, the Selective Information Delivery mechanism is applied.

- The *CallManagement* service events the *CallInfo* state variable to all the subscribed TelCPs containing only the general information of the Call, such as <*callID*>, <*targetNames*>, and <*callStatus*> elements. See section 2.4.2 for more detail on which elements of the *CallInfo* state variable should be and should not be evented.

- When the *CallManagement* service receives the *GetCallInfo()* action request targeting the Call, the *CallManagement* service verifies if the current identity (TelCP or User) is the Monopolizer or allowed to answer the Call. If so, the returned *CallInfo* state variable contains full information of the Call; otherwise, it contains only general information of the Call, such as <*callID*>, <*TelCPNames*>, and <*callStatus*> elements. See section 2.4.2 for more detail on which elements of the *CallInfo* state variable should be and should not be returned.

2.3.4 Handling of Media Streams

The *CallManagement* service provides two kinds of mechanisms for handling the Media Streams between the Peers. The first mechanism is "TC-Based Media Handling" and the other mechanism is "TS-Based Media Handling".

2.3.4.1 TC-Based Media Handling

In the TC-Based Media Hanadling the TelCP uses one or more TC devices in the ongoing Call. The TelCP creates Media Session(s) between the TS and the TC(s). The Media Streams are sent and/or received between the TC(s) and the Remote Party via the TS using the Media Session(s). For establishing the Media Session for the Call the TelCP negotiates a common set of Media Capabilities between the TS and the TC by matching the Media Capabilities supported by the TS and the TC(s). The TelCP can get the list of supported Media Capabilities of the TS by invoking the *CaMS::GetMediaCapabilities()* action or by receiving the *CallInfo* state variable event when the TS receives an incoming Call request or a modify Call request. The Media Capabilities of the TS are described in the <mediaCapability> element of the *A_ARG_TYPE_MediaCapabilityInfo* state variable or the *CallInfo* state variable which are defined in this document. The TelCP can get the list of supported Media Capabilities of the TC by invoking the *MMS::GetMediaCapabilities()* action. The Media Capabilities of the TC are described in the <mediaCapability> element of the *A_ARG_TYPE_MediaCapabilityInfo* state variable which is defined in the *MediaManagement* service[MMS].

Once the TelCP decides on the Media Capabilities for the Call, the TelCP invokes the *StartCall()*, *AcceptCall()*, *ModifyCall()* or *AcceptModifyCall()* action to negotiate the Media Capabilities with the Remote Party for establishing the Call or modifing the ongoing Call. When the Call is successfully

established or modified, the TelCP invokes the *MMS:StartMediaSession()* action on the TC and the *CaMs::StartMediaTransfer()* action on the TS to start the Media Stream transfer between the TS and TC(s). The detail sequence diagrams for the TC-Based Media Stream handling are shown in section 3.1.

2.3.4.2 TS-Based Media Handling

A TS can be implemented on a physical device like a mobile phone or a HGW. More often physical device itself has the capabilities to handle the Media Streams with certain media codec support. This kind devices also provide input/output functionality for the media transfer (e.g., a mobile phone has an audio codec, capability to send and/or receive an audio stream, and mic/speaker as the input/output devices to talk with the Remote Party during the Call). The TS-Based Media Handling enables a TelCP to use the TS capabilities of handling the Media Stream in a Call without implementing the TC device functionalities on the physical device which has the TS. For this purpose, the TS exposes the Media Capabilities corresponding to the Media Streams which can be handled by the TS. This Media Capabilities are refferred to as the "Native Media Capability" of the TS and are described in the <nativeMediaCapability> element of the *CallInfo* state variable or in the *A_ARG_TYPE_MediaCapabilityInfo* state variable. A TelCP can get the Native Media Capabilities of the TS by invoking the *GetMediaCapabilities()* action or receiving the *CallInfo* state variable when the TS receives an incoming Call or a modify Call request. The TelCP decides on the Native Media Capability for the Call and then the TelCP invokes the *StartCall()*, *AcceptCall()*, *ModifyCall()* or *AcceptModifyCall()* action to negotiate the Media Capabilities with the Remote Party for establishing the Call or modifing the ongoing Call. When the Call is successfully established or modified, the TelCP invokes *CaMS::StartMediaTransfer()* action on the TS to start the Media Stream transfer between the TS and the Remote Party. The detail sequence diagrams for the TS-Based Media Stream handling are shown in section 3.1.

.

The "TC-Based Media Handling" and "TS-Based Media Handling" can be used simultaneously in a Call. For example, when the TS is implemented on a mobile phone and there is a TC for sending and/or receiving a video stream, the TelCP can create a video Call using the mobile phone as a TS for sending and receiving the audio stream and the TC for sending and/or receiving the video stream. In this case, the TelCP uses "TC-Based Media Handling" for the video capabilities and "TS-Based Media Handling" for the audio capabilities.

2.4 State Variables

Note: For first-time reader, it may be more insightful to read the theory of operations first and then the action definitions before reading the state variable definitions.

2.4.1 State Variable Overview

Table 2-2:　　State Variables

Variable Name	R/O[1]	Data Type	Reference
CallInfo	*O*	**string**(XML fragment)	See Section 2.4.2
TelCPNameList	*O*	**string**	See Section 2.4.3
CallBackAvailability	*O*	**string**(XML fragment)	See Section 2.4.4
A_ARG_TYPE_TelephonyServerIdentity	*R*	**string**	See Section 2.4.5
A_ARG_TYPE_TelCPName	*O*	**string**	See Section 2.4.6
A_ARG_TYPE_TelCPNameList	*O*	**string**	See Section 2.4.7

Variable Name	R/O[1]	Data Type	Reference
A_ARG_TYPE_Expires	*O*	**i4**	See Section 2.4.8
A_ARG_TYPE_MediaCapabilityInfo	*O*	**string**(XML fragment)	See Section 2.4.9
A_ARG_TYPE_CalleeID	*R*	**string**	See Section 2.4.10
A_ARG_TYPE_CallPriority	*O*	**string**	See Section 2.4.11
A_ARG_TYPE_CallMode	*O*	**string**	See Section 2.4.12
A_ARG_TYPE_CallID	*R*	**string**	See Section 2.4.13
A_ARG_TYPE_SecretKey	*O*	**string**	See Section 2.4.14
A_ARG_TYPE_RejectReason	*O*	**string**	See Section 2.4.15
A_ARG_TYPE_TCList	*O*	**string**(XML fragment)	See Section 2.4.16
A_ARG_TYPE_CallInfoList	*O*	**string**(XML fragment)	See Section 2.4.17
A_ARG_TYPE_CallLogs	*O*	**string**(XML fragment)	See Section 2.4.18
A_ARG_TYPE_CallBackID	*O*	**string**	See Section 2.4.19
A_ARG_TYPE_CallBackInfoList	*O*	**string**(XML fragment)	See Section 2.4.20

[1] *R* = REQUIRED, *O* = OPTIONAL, *CR* = CONDITIONALLY REQUIRED, *CO* = CONDITIONALLY OPTIONAL, *X* = Non-standard, add *-D* when deprecated (e.g., *R-D*, *O-D*).

2.4.2   *CallInfo*

The format of the *CallInfo* state variable is an XML document. It includes information about a Call. It contains the CallID, the priority of the Call, Remote Party's ID, Call Status, TC's information (i.e., UUID and Media Session ID), and Media Capability etc.

The *CallInfo* state variable is evented when the *CallManagement* service receives an incoming Call or the Call Status of an existing Call is changed.

2.4.2.1   XML Schema Definition

This is a string containing an XML fragment. The XML fragment in this argument MUST validate against the XML schema for `CallInfo` in the XML namespace "`urn:schemas-upnp-org:phone:cams`" which is located at "`http://www.upnp.org/schemas/phone/cams-v1.xsd`".

2.4.2.2   Description of fields in the *CallInfo* structure

```
<?xml version="1.0" encoding="utf-8"?>
<cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer">
   <callID>unique ID for the Call</callID>
   <targetNames type="type of the targetName">
      unique names or IDs for targets
   </targetNames>
```

```
   <callStatus reason="reason why Call Status is changed">
      status of the Call
   </callStatus>
   <priority>priority of the Call</priority>
   <remoteParty>
      <peer:id>ID of the Peer</peer:id>
   </remoteParty>
   <TCList>
      <TC>
         <UDN>uuid:UUID</UDN>
         <mediaSessionID>Unique Media Session ID</mediaSessionID>
      </TC>
      <!-- Any other TC (if any) go here.-->
   </TCList>
   <enableMediaMixing>1 or 0</enableMediaMixing>
   <shareMedia>Media Session ID</shareMedia>
   <mediaCapability format="format of the Media Capability">
      Media Capability
   </mediaCapability>
   <nativeMediaCapability format="format of the Native Media Capability">
      Native Capability
   </nativeMediaCapability>
</cams:callInfo>
```

`<xml>`
> REQUIRED. Case Sensitive.

`<CallInfo>`
> REQUIRED. MUST include the name space declaration for the complex type <peerType> ("urn:schemas-upnp-org:phone:peer") and the namespace declaration for the *CallManagement* service Schema ("urn:schemas-upnp-org:phone:cams"). This namespace "urn:schemas-upnp-org:phone:cams" defines the following elements and attributes:

> `<callID>`
>> REQUIRED. xsd:string, MUST include the CallID which is unique for a Call.
>> The *CallManagement* service generates the CallID when this service receives an incoming Call or receives *StartCall()* or *InitiateCall()* action.

> `<targetNames>`
>> REQUIRED. xsd:string, MUST include a list of identities(TelCP or user) for Selective Information Delivery (See 2.3.3). The type of identifiers is decided by the attribute "type". The identifiers are listed by comma separated values. When the value of this element is set to "*", all the identifiers are allowed to manage the Call. An identifier MUST NOT include any comma(",") in the string. The allowed values of this attribute are as follows:

Table 2-3:   Allowed values for type

Value	Description
"*TelCPName*"	This identity is described by TelCPName which is defined in the *CallManagement* service.
"*TelCPID*"	This identity is described by Control Point Identity which is defined in the *DeviceProtection* service[DP].
"*Username*"	This identity is described by Username which is defined in the *DeviceProtection* service[DP].

> `<callStatus>`
>> REQUIRED. xsd:string, Indicates the status of the Call. The allowed values of this elements are as follows:
>> And this element has an attribute which name is "reason".

Table 2-4:   Alllowed values for callStatus

Value	Description
"*Ringing*"	The status of the Call when a TS receives an incoming Call. The status of the Call remains as "Ringing" state until a TelCP accepts or rejects the Call.
"*Dialing*"	The status of the Call when the TS is initiating the Call. The status of the Call remains as "Dialing" state until the Call is received by the Callee in WAN side.
"*Calling*"	The status of the Call when the Callee receives the Call. The status of the Call remains as "Calling" state until the Call is answered by the Callee.
"*Connected*"	The status of the Call when the Call is accepted by the Callee. The status of the Call remains as "Connected" state until the Media Streams transfer start.
"*Talking*"	The status of the Call when the Media Streams transfer starts. The status of the Call remains as "Talking" state until the Call is terminated or modified.
"*Disconnected*"	The status of the Call when the Call is terminated.
"*SendingModifyRequest*"	The status of the Call when the TS sends the request to modify the Media Capability of an existing Call (e.g. adding video capability to the audio Call). The status of the Call remains as "SendingModifyRequest" state until the Remote Party answers the modify request.
"*ReceivingModifyRequest*"	The status of the Call when the TS receives the request to modify the Media Capability of an existing Call from the WAN side (e.g. adding video capability to the audio Call). The staus of the Call remains as "ReceivingModifyRequest" state until the TelCP answers the modify request.
"*Modified*"	The status of the Call when the modify request is accepted by the Caller or the Callee. The status of the Call remains as the "Modified" state until the Media Streams transfer resumes based on the new Media Capabilities.
"*ModifiyFailed*"	The status of the Call when the modify request is failed or rejected. The status of the Call remains as the "ModifyFailed" state until the Media Streams transfer resumes.

reason
OPTIONAL. xsd:string, Indicates the reason why status of a Call is changed. The following table shows the values of reason attribute and relevant Call Status:

Table 2-5:   Allowed values for reason and the corresponding values of the Call Status

Value	Call Status	Description
"*Accepted by TS*"	"*Talking*"	The Callee accepted a Call on the TS.
"*Initiated by TS*"	"*Talking*"	The TS itself created an outgoing Call.

Value	Call Status	Description
"*Busy*"	"*Disconnected*"	The Callee is busy.
"*Not Acceptable Capability*"	"*Disconnected*"	The Callee does not support the Media Capability.
"*Not Found*"	"*Disconnected*"	The Callee does not exist.
"*Rejected by TS*"	"*Disconnected*"	The Callee rejects an incoming Call on TS
"*Rejected*"	"*Disconnected*"	The Callee rejects an incoming Call.
"*Rejected*"	"*ModifyFailed*"	The Caller or the Callee rejects an incoming modify request.
"*Cancelled*"	"*Disconnected*"	The Caller cancelled the Call.
"*Cancelled*"	"*ModifyFailed*"	The Caller or the Callee cancelled the modify request.
TBD	*TBD*	*(Specifed by UPnP vendors.)*

```
<priority>
```
OPTIONAL. xsd:string, Indicates the priority of the Call. In the case of a Monopolization Mode Call, this element is not included in the *CallInfo* state variable. The <priority> element can have the following values.

Table 2-6:   Allowed values for priority

Value	Description
"*Emergency*"	Emergency Call.
"*Normal*"	Regular Call.
TBD	*(Specifed by UPnP vendors.)*

```
<remoteParty>
```
OPTIONAL. peer:peerType, Includes the unique ID of the Remote Party. If the Call is anonymous, the value of the <peer:id> elements set to as the string "anonymous". In the case of a Monopolization Mode Call, this element is not included in the *CallInfo* state variable.

```
<TCList>
```
OPTIONAL. Includes information about one or more TCs. In the case of a Monopolization Mode Call, this element and subelements are not included in the *CallInfo* state variable. It has following sub elements.

```
<TC>
```
OPTIONAL, Includes information about a TC. It has two sub elements: <UDN> and <mediaSessionID>.

```
<UDN>
```
OPTIONAL, Indicates the unique device name of a TC.

```
<mediaSessionID>
```
OPTIONAL. Indicates the uniquie ID for a Media Session. See MedaiManagement:1 specification[MMS] in detail.

```
<enableMediaMixing>
```
OPTIONAL. Indicates whether a TS mixes Media Streams from multiple TCs involved in the Call. A value of "1" means that the TS mixes Media Streams from multiple TCs involved in the Call. A value of "0" means that the TS does not mix Media Streams from multiple TCs involved in the Call. In the case of a Non Monopolization Mode Call, if the <enableMediaMixing> element is not included in the *CallInfo* state variable, then the behavior of this service is the same as the value of the <enableMediaMixing> element is "0". In the case of a Monopolization

Mode Call, the <enableMediaMixing> element is not included in the *CallInfo* state variable. But the output argument of the *GetCallInfo()* action can include this element if the Monopolizer invokes the *GetCallInfo()* action.

`<shareMedia>`
OPTIONAL. Includes the Media Session ID to identify the Media Session to be shared among TCs involved in the Call. In the case of a Non-Monopolization Mode Call, if the <shareMedia> element is not included in the *CallInfo* state variable, it means that a Media Session is not shared among TCs. In the case of a Monopolization Mode Call, the <shareMedia> element is not included in the *CallInfo* state variable when the TS events the *CallInfo* state variable. But if the Monopolizer invokes the *GetCallInfo()* action, this element is included. The <enableMediaMixing> element and the <shareMedia> element are mutually exclusive and if one element exists in the *CallInfo* state variable then the other MUST NOT exist.

`<mediaCapability>`
OPTIONAL. This element is used to represent the Media Capabilities of an incoming call or Media Capabilities for the Call which are handled using the TC-Based Media Handling mechanism.

`format`

OPTIONAL. xsd:string, Indicates the format of Media Capabilities. Allowed values of this attribute are as follows:

Table 2-7:   Allowed values for format

Value	Description
SDP	Media Capability as defined by SDP[RFC4566].
TBD	*(Specifed by UPnP vendors.)*

`<nativeMediaCapability>`
OPTIONAL. This element is used to represent the TS's Native Media Capabilities or Media Capabilities of the Call which are handled using the TS-Based Media Handling mechanism.

`format`

OPTIONAL. xsd:string, Indicates the format of Media Capabilities for this element. Allowed values of this attribute are shown in Table 2-7.

2.4.3 *TelCPNameList*

The *TelCPNameList* state variable includes the names of all the existing TelCPs. The format of the *TelCPNameList* state variable is a comma separated values. It is the same as the format of the *A_ARG_TYPE_TelCPNameList*. When a new TelCP is registered or a TelCP is unregistered or the name of a TelCP is changed, then the *TelCPNameList* state variable is evented.

2.4.4 *CallBackAvailability*

This state variable contains the *A_ARG_TYPE_CallBackID* state variable. This state variable is evented when a Call that is registered for a Call back becomes available. When a Call is registered for a Call back, the TS returns the *CallBackID* ID. Once the registered Call becomes available from the WAN side, the TS notifies the availability of the Call using this state variable.

2.4.4.1 XML Schema Definition

This is a string containing an XML fragment. The XML fragment in this argument MUST validate against the XML schema for *CallBackAvailbility* in the XML namespace "`urn:schemas-upnp-org:phone:cams`" which is located at "`http://www.upnp.org/schemas/phone/cams-v1.xsd`".

2.4.4.2 Description of fields in the *CallBackAvailability* structure

```xml
<?xml version="1.0" encoding="utf-8"?>
<cams:callBackAvailability
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams">
     <callBack>
        <callBackID>ID of the Call back</callBackID>
     </callBack>
     <!-- Any other Call back (if any) go here.-->
</cams:callbackAvailability>
```

`<xml>`
    REQUIRED for all XML documents. Case sensitive.

`<CallBackAvailability>`
    REQUIRED. Root element.

    `<CallBack>`
        REQUIRED. Contains the list of Call backs that are available and uniquely identified by the CallBackIDs. It
        includes the CallBackID sub element.

       `<CallBackID>`
            REQUIRED, Indicates the ID of the Call back.

2.4.5 *A_ARG_TYPE_TelephonyServerIdentity*

This state variable contains the unique identifier of a Telephony Server. The identity of a Telephony Server is expressed using the standard URI (Unified Resource Identifier) scheme as specified in [RFC 2396]. In case of SIP, the identity of the Telephony Server identity contains the SIP URI. In case of a generic resource identified by a telephone number, the Telephony Server identity contains the TEL URI [RFC 3966].

2.4.6 *A_ARG_TYPE_TelCPName*

The *A_ARG_TYPE_TelCPName* state variable describes a unique name for a TelCP. Each TelCP has its own name. A TelCP can register its name to the *CallManagement* service by invoking the *RegisterTelCPName()* action. And a TelCP also can unregister and change its TelCPName by invoking the *RegisterTelCPName()* action. It is recommended that this state variable includes human readable and understandable string. (e.g. TV@Living, Alice's TV etc.)

2.4.7 *A_ARG_TYPE_TelCPNameList*

The *A_ARG_TYPE_TelCPNameList* state variable includes the names of all the TelCPs. The format of the *A_ARG_TYPE_TelCPNameList* is comma separated values of sting. The structure of this state variable is the same as the format of the *TelCPNameList* state variable.

2.4.8 *A_ARG_TYPE_Expires*

The *A_ARG_TYPE_Expires* state variable contains the value of the duration for validity of the TelCPName. The value of this state variable is an integer number in seconds.

2.4.9 *A_ARG_TYPE_MediaCapabilityInfo*

This state variable defines an XML document that contains the Media Capability of a Media Session.

2.4.9.1 XML Schema Definition

This is a string containing an XML fragment. The XML fragment in this argument MUST validate against the XML schema for *MediaCapabilityInfo* in the XML namespace "urn:schemas-upnp-org:phone:cams" which is located at "http://www.upnp.org/schemas/phone/cams-v1.xsd".

2.4.9.2 Description of fields in the *A_ARG_TYPE_MediaCapabilityInfo* structure

```
<?xml version="1.0" encoding="utf-8"?>
<cams:mediaCapabilityInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams">
   <mediaMixingCapability></mediaMixingCapability>
   <mediaSharingCapability></mediaSharingCapability>
   <enableMediaMixing> 1 or 0 </enableMediaMixing>
   <shareMedia>Media Session ID</shareMedia>
   <mediaCapability format="format of the Media Capability">
      Media capability
   </mediaCapability>
   <nativeMediaCapability format="format of the Native Media Capability">
      Media capability
   </nativeMediaCapability>
</cams:mediaCapabilityInfo>
```

<xml>
>   REQUIRED. Case sensitive.

<mediaCapabilityInfo>
>   REQUIRED. MUST include a namespace declaration for the *CallManagement* service Schema ("urn:schemas-upnp-org:phone:cams"). This namespace defines the following elements and attributes:

>   <mediaMixingCapability>
>>   OPTIONAL. The existence of this tag indicates whether a TS supports media mixing ability. This tag can only exist in the output argument *SupportedMediaCapabilityInfo* of the *GetMediaCapabilities()* action. This tag MUST not exist in any other input or output arguments of the type *MediaCapabilityInfo* used by any other actions.

>   <mediaSharingCapability>
>>   OPTIONAL. The existence of this tag indicates whether a telephony client support the media sharing feature. This tag can only exist in the output argument *MediaCapabilityInfo* of the *GetMediaCapabilities ()* action. This tag MUST not exist in any other input or output arguments of type *A_ARG_TYPE_MediaCapabilityInfo* state variable used by any other actions.

>   <enableMediaMixing>
>>   OPTIONAL. Indicates whether a TS needs to mix media from multiple TCs involved in the Call. This tag can only exist in the argument of type *MediaCapabilityInfo* of the *StartMediaTransfer ()* and *ModifyCall()* actions. This tag MUST not exist in any other input or output arguments of type *A_ARG_TYPE_MediaCapabilityInfo* used by any other actions. A value of "1" means that the TS needs to mix media from multiple Telephony Clients involved in the Call. A value of "0" means that the Telephony Server MUST stop mixing media from multiple Telephony Clients involved in the Call.

>   <shareMedia>
>>   OPTIONAL. Indicates to the TS that the session is for sharing the media of the Media Session identified by the value of the <shareMedia> element. This tag is only valid when used in the argument of type *MediaCapabilityInfo* of the *StartMediaTransfe()* or *ModifyCall()* actions and when creating Media Sessions for sharing media. Please refer to section 2.3.1 for the appropriate usage of this tag.

>   <mediaCapability>
>>   OPTIONAL. Indicates the Media Capabilities for the Call which are handled using TC-Based Media Handling mechanism.

>>   format

> OPTINAL. xsd:string, Indicates the format of Media Capability. Allowed values of this attribute are shown in Table 2-7.

```
<nativeMediaCapability>
```
> OPTIONAL. Indicates the Media Capabilities for the Call which are handled using TS-Based Media Handling mechanism.
> ```
> format
> ```
> OPTIONAL. xsd:string, Indicates the format of Media Capabilities for this element. Allowed values of this attribute are shown in Table 2-7.

2.4.10 *A_ARG_TYPE_CalleeID*

This state variable contains the unique identifier of a Callee. The format of this state variable is URI or *A_ARG_TYPE_TelCPName*. URI is used when a TelCP creates a Call to a Remote Party in the WAN side. *A_ARG_TYPE_TelCPName* is used when a TelCP creates a Call to a Remote Party in the same LAN side.

2.4.11 *A_ARG_TYPE_CallPriority*

This state variable contains the priority of the Call. The allowed values of this state variable are shown in the following table:

Table 2-8:　allowedValueList for the *A_ARG_TYPE_CallPriority* state variable

Value	R/O[1]
"*Normal*" (DEFAULT)	*R*
"*Emergency*"	*O*

where:

- "*Normal*" indicates a regular Call.
- "*Emergency*" indicates an emergency Call (e.g., Call to the police, Call to the fire station etc.).

2.4.12 *A_ARG_TYPE_CallMode*

This state variable contains one of the modes for a Call. The allowed values of this state variable are shown in the following table:

Table 2-9:　allowedValueList for the *A_ARG_TYPE_CallMode* state variable

Value	R/O[2]
"*PHONE-TelCP*"	*O*
"*DP-TelCP*"	*O*
"*DP-User*"	*O*
"*Non-Monopolize*"	*R*

where:

- "*PHONE-TelCP*" indicates PHONE-Based Call Monopolization mechanism defined in Section 2.3.2. "*DP-TelCP*" indicates TelCP-Level Call Monopolization mechanism using the *DeviceProtection* service. See [TSBP] in detail.
- "*DP-User*" indicates User-Level Call Monopolization mechanism using the *DeviceProtection* service. See [TSBP] in detail.

- "*Non-Monopolize*" indicates a Non-Monopolization Mode Call.

2.4.13 *A_ARG_TYPE_CallID*

This state variable uniquely indentifies the Call. The *CallManagement* service assigns a unique ID for a Call when either the *StartCall()* or *InitiateCall()* action is invoked or it receives an incoming Call. It is RECOMMENDED to follow the RFC3261 for the format of the CallID.

2.4.14 *A_ARG_TYPE_SecretKey*

This state variable contains a unique key that is assigned by a TS to the TelCP. The TelCP uses this key to authenticate itself to the TS in order to manage a Monopolization Mode Call. This key is assigned when the TelCP invokes the *RegisterTelCPName()* action.

2.4.15 *A_ARG_TYPE_RejectReason*

This state variable contains the reason for rejecting an incoming Call or a modification request for a Call.

2.4.16 *A_ARG_TYPE_TCList*

This state variable includes a list of TCs information associated with a Call. The list includes the UDN and the Media Session ID for each TC.

2.4.16.1 XML Schema Definition

This is a string containing an XML fragment. The XML fragment in this argument MUST validate against the XML schema for *TCList* in the XML namespace "`urn:schemas-upnp-org:phone:cams`" which is located at "`http://www.upnp.org/schemas/phone/cams-v1.xsd`".

2.4.16.2 Description of fields in the *TCList* structure

```
<?xml version="1.0" encoding="utf-8"?>
<cams:TCList
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams">
    <TC>
        <UDN>uuid:UUID</UDN>
        <mediaSessionID>Unique Media Session ID</mediaSessionID>
    </TC>
    <!-- Any other TC info (if any) go here.-->
</cams:TCList>
```

<xml>
REQUIRED. Case Sensitive.

<TCList>
REQUIRED. MUST include the namespace declaration for the *CallManagement* service Schema ("urn:schemas-upnp-org:phone:cams"). This namespace "urn:schemas-upnp-org:phone:cams" defines the following elements to includes information about one or more TCs:

    <TC>
    OPTIONAL. Includes information about a TC. It has two sub elements: <UDN> and <mediaSessionID>.

    <UDN>
    OPTIONAL, Indicates a unique device name of a TC.

    <mediaSessionID>

REQUIRED. Indicates a uniquie ID for a Media Session. See MedaiManagement:1 specification[MMS] in detail.

2.4.17 *A_ARG_TYPE_CallInfoList*

This state variable contains a list of onging Calls and their information as defined in the *CallInfo* structure.

2.4.17.1 XML Schema Definition

This is a string containing an XML fragment. The XML fragment in this argument MUST validate against the XML schema for `CallInfoList` in the XML namespace "urn:schemas-upnp-org:phone:cams" which is located at "http://www.upnp.org/schemas/phone/cams-v1.xsd".

2.4.17.2 Description of fields in the *A_ARG_TYPE_CallInfoList* structure

```xml
<?xml version="1.0" encoding="utf-8"?>
<cams:callInfoList
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer">
   <callInfo>
      <callID>unique ID for the Call</callID>
      <targetNames type="type of the targetName">
         unique names or IDs for targets
      </targetNames>
      <callStatus reason=reason why Call Status is changed>
         status of the Call
      </callStatus>
      <priority>priority of the Call</priority>
      <remoteParty>
         <peer:id>ID of the Peer<peer:id>
      </RemoteParty>
      <TCList>
         <TC>
            <UDN>uuid:UUID</UDN>
            <mediaSessionID>Unique Media Session ID</mediaSessionID>
         </TC>
         <!-- Any other TC (if any) go here.-->
      </TCList>
      <mediaCapability format="format of Media Capability">
         Media capability
      </mediaCapability>
   </callInfo>
   <callInfo>
      <callID>unique ID for the Call</callID>
      <TelCPNames>unique names for the TelCPs</TelCPNames>
      <callStatus reason="reason why status is changed">
         status of the Call
      </callStatus>
   </callInfo>
   <!-- Any other callInfo (if any) go here.-->
</cams:callInfoList>
```

```
<xml>
```
    REQUIRED.Case sensitive.

```
<callInfoList>
```
    REQUIRED. MUST include the name space declaration for the complex type <peerType> ("urn:schemas-upnp-org:phone:peer") and the namespace declaration for the *CallManagement* service Schema ("urn:schemas-upnp-org:phone:cams"). This element includes one or more <callInfo> elements as described in the *CallInfo* structure.

2.4.18 *A_ARG_TYPE_CallLogs*

This state variable contains the history of the Calls managed by a TS.

2.4.18.1 XML Schema Definition

This is a string containing an XML fragment. The XML fragment in this argument MUST validate against the XML schema for *CallLogs* in the XML namespace "urn:schemas-upnp-org:phone:cams" which is located at "http://www.upnp.org/schemas/phone/cams-v1.xsd".

2.4.18.2 Description of fields in the *CallLogs* structure

```
<?xml version="1.0" encoding="utf-8"?>
<cams:callLogs
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer=" urn:schemas-upnp-org:phone:peer">
 <call direction=incoming|outgoing success=true|false>
    <type> type of the Call whether audio, video or data</type>
    <caller>
        <peer:id>id of the Caller</peer:id>
        <peer:name>user friendly name associated with id</peer:name>
    </caller>
    <callee>
        <peer:id>id of the Caller</peer:id>
        <peer:name>user friendly name associated with id</peer:name>
    </callee>
    <startDateTime>time in ISO 8601 format </startDateTime>
    <duration>Call duration in msec</duration>
   </call>
   <!-- Any other Call History (if any) go here.-->
</cams:callLogs>
```

<xml>
    REQUIRED. Case sensitive.

<callLogs>
    REQUIRED. MUST include the name space declaration for the complex type <peerType> ("urn:schemas-upnp-org:phone:peer") and the namespace declaration for the *CallManagement* service Schema ("urn:schemas-upnp-org:phone:cams"). This namespace "urn:schemas-upnp-org:phone:cams" defines the following elements and attributes:

    <call>
        OPTIONAL. Contains information relevant to a Call managed by a TS. The *direction* attribute identifies whether it is an incoming or outgoing Call and the *success* attribute identifies whether the Call was successful or failed. It contains the following sub elements:

        <type>
            REQUIRED. Identifies the type of the Call such as audio video or data Call.

        <caller>
            REQUIRED. peer:peerType, Contains information related to a Caller. It contains the following sub elements:

```
<peer:id>
     REQUIRED. Uniquely identifies a Caller (i.e., telephone number or SIP address etc.)

<peer:name>
     OPTIONAL. Contains a user friendly name for the Caller.

<callee>
  REQUIRED. peer:peerType,Contains information related to a Callee. Contains the following sub elements:

<peer:id>
     REQUIRED. Uniquely identifies a Callee (i.e., telephone number or SIP address etc.)
<peer:name>
     OPTIONAL. Contains a user friendly name for the Callee.

<startDataTime>
  REQUIRED. Indicates the starting time of the Call. The format of the element is in ISO 8601 format.

<duration>
  OPTIONAL. Indicates the entire duration of the Call in milliseconds.
```

2.4.19 *A_ARG_TYPE_CallBackID*

This state variable contains the unique identifier of a Call back registration. A TS generates this unique identifier as a result of the Call back registration request from a TelCP. The TS uses this unique identifier in the event notification message to indicate the status of the Call back registration which includes the availability of the Callee.

2.4.20 *A_ARG_TYPE_CallBackInfoList*

This state variable contains the list of Call backs that are currently registered with the TS. The structure of the *A_ARG_TYPE_CallBackInfoList* state variable is a XML Document:

- <callbackinfo> is the root element.

Note that since the value of *A_ARG_TYPE_CallBackInfoList* is XML, it needs to be escaped (using the normal XML rules: [RFC4566] – IETF RFC 4566, SDP: Session Description Protocol, M. Handley, UCL, V. Jacobson, Packet Design, C. Perkins, University of Glasgow, July 2006.
Available at: http://www.ietf.org/rfc/rfc4566.txt.

[XML] Section 2.4 Character Data and Markup) before embedding in a SOAP response message.

2.4.20.1 XML Schema Definition

This is a string containing an XML fragment. The XML fragment in this argument MUST validate against the XML schema for `CallBackInfoList` in the XML namespace "urn:schemas-upnp-org:phone:cams" which is located at "http://www.upnp.org/schemas/phone/cams-v1.xsd".

2.4.20.2 Description of fields in the *CallBackInfoList* structure

```
<?xml version="1.0" encoding="utf-8"?>
<cams:callBackInfoList
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer">
   <callBackInfo>
      <callBackID>identifies a Call back registration</callBackID>
      <callee>
```

```
        <peer:id>id of the Callee</peer:id>
      </callee>
   </callBackInfo>
</cams:callBackInfoList>
```

```
<xml>
```
REQUIRED. Case sensitive.

```
<callBackInfoList>
```
REQUIRED. MUST include the name space declaration for the complex type <peerType> ("urn:schemas-upnp-org:phone:peer") and the namespace declaration for the *CallManagement* service Schema ("urn:schemas-upnp-org:phone:cams"). This namespace "urn:schemas-upnp-org:phone:cams" defines the following elements and attributes:

      `<callBackInfo>`
        OPTIONAL. Includes a specific entry for the Call back registration including the ID of the Call back that uniquely identifies a specific Call back registration and the ID of the Callee.

        `<callBackID>`
          REQUIRED. Uniquely indentifies a Call back registration within a TS.

        `<callee>`
          REQUIRED. peer:peerType, Includes a unique identification of the Callee such as phone number or SIP address etc. Contains the following sub elements:

          `<peer:id>`
            REQUIRED. Uniquely identifies a Callee (i.e., telephone number or SIP address etc.)

2.5 Eventing and Moderation

Table 2-10:   Eventing and Moderation

Variable Name	Evented	Moderated[1]	Criteria
		Moderation	
CallInfo	*YES*	*NO*	
CallBackAvailability	*YES*	*NO*	
TelCPNameList	*YES*	*NO*	

[1] *YES* = The state variable MUST be moderated with the criteria

[1] *R* = REQUIRED, *O* = OPTIONAL, *X* = Non-standard.

[2] *R* = REQUIRED, *O* = OPTIONAL, *X* = Non-standard.

2.5.1 Eventing of *CallInfo*

This state variable is evented when the status of the Call changes or the *CallManagement* service receives an incoming Call.

When this state variable is evented the <callID> element MUST include the CallID for the Call whose status has changed or in the case of an incoming Call, this element includes the CallID of the incoming Call .

2.5.2 Eventing of *CallBackAvailability*

This state variable is evented when the Callee of a registered Call back becomes available to receive the Call.

2.5.3 Eventing of *TelCPNameList*

This state variable is evented when a new TelCPName is registered with the TS, or the TelCPName is unregistered or the registered TelCPName is changed.

When a TelCP receives an event message with this state variable, the TelCP MUST update the list of TelCPNames which is being managed by the TelCP.

2.6 Actions

Table 2-11:   Actions

Name	Device R/O[1]	Control Point R/O[2]
GetTelephonyIdentity()	R	R
RegisterTelCPName()	O	O
UnregisterTelCPName()	O	O
ChangeTelCPName()	O	O
GetTelCPNameList()	O	O
GetMediaCapabilities()	O	O
StartCall()	O	O
StopCall()	O	O
AcceptCall()	O	O
RejectCall()	O	O
ModifyCall()	O	O
AcceptModifyCall()	O	O
StartMediaTransfer()	O	O
ChangeMonopolizer()	O	O
InitiateCall()	R	R
GetCallInfo()	O	O
GetCallLogs()	O	O
ClearCallLogs()	O	O
RegisterCallBack()	O	O
ClearCallBack()	O	O
GetCallBackInfo()	O	O

---

[1] For a device this column indicates whether the action MUST be implemented or not, where *R* = REQUIRED, *O* = OPTIONAL, *CR* = CONDITIONALLY REQUIRED, *CO* = CONDITIONALLY OPTIONAL, *X* = Non-standard, add *-D* when deprecated (e.g., *R-D*, *O-D*)..

[2] For a control pont this column indicates whether a control point MUST be capable of invoking this action, where *R* = REQUIRED, *O* = OPTIONAL, *CR* = CONDITIONALLY REQUIRED, *CO* = CONDITIONALLY OPTIONAL, *X* = Non-standard, add *-D* when deprecated (e.g., *R-D*, *O-D*)..

2.6.1 *GetTelephonyIdentity()*

This action returns the identity of the Telephony Server. If the action succeeds then the output argument *TelephonyIdentity* contains the unique identity of the Telephony Server. If the identity of the Telephony Server has not been assigned by the time this action is invoked then this action will fail with an error code.

2.6.1.1 Arguments

Table 2-12: Arguments for *GetTelephonyIdentity()*

Argument	Direction	relatedStateVariable
TelephonyIdentity	*OUT*	*A_ARG_TYPE_TelephonyServerIdentity*

2.6.1.2 Argument Descriptions

The value of the output argument *TelephonyIdentity* MUST contain a valid URI as specified in [RFC 2396]. The value follows the standard URI definitions. In case of SIP, the SIP URI [RFC 3261] is used. In case of a generic resource identified by a telephone number, the TEL URI [RFC 3966] is used.

The examples of SIP URI as the value of the output argument *TelephonyIdentity* are as follows:

```
sip:alice@atlanta.com
```

```
sip:alice:secretword@atlanta.com;transport=tcp
```

```
sips:alice@atlanta.com?subject=project%20x&priority=urgent
```

```
sip:+1-212-555-1212:1234@gateway.com;user=phone
```

```
sips:1212@gateway.com
```

```
sip:alice@192.0.2.4
```

The IETF RFC 3261 [http://tools.ietf.org/html/rfc3261] defines the `sip:` (`sips:`, for resources to be contacted securely) URI scheme whereas the general form, is: sip:user:password@host:port;uri-parameters?headers

The examples of TEL URI as the value of the output argument *TelephonyIdentity* are as follows:

Tel:+1-201-555-0123 (This URI points to a phone number in the United States. The hyphens are included to make the number more human readable; they separate country, area code and subscriber number.)

`tel:7042;phone-context=example.com` (This URI describes a local phone number valid within the context "example.com".)

`tel:863-1234;phone-context=+1-914-555` (This URI describes a local phone number that is valid within a particular phone prefix.)

The IETF RFC 3966 [http://tools.ietf.org/html/rfc3966] defines the URI scheme `tel`, which describes any resources identified by telephone numbers. A telephone number is a string of decimal digits that uniquely indicates the network termination point. The number contains the information necessary to route the call to this point.

The section 19.1.6 Relating SIP URIs and tel URLs] of RFC 3261 describes how to deal with conversion and compatibility rules among SIP/SIPS URI and TEL URI. Implementers MUST be aware of these recommendations.

2.6.1.3   Service Requirements

None.

2.6.1.4   Control Point Requirements When Calling The Action

None.

2.6.1.5   Dependency on Device State

None.

2.6.1.6   Effect on Device State

None.

2.6.1.7   Errors

Table 2-13:   Error Codes for *GetTelephonyIdentity()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
714	Identity does not exist	The identity of the TS has not been assigned yet by the telephony service in the WAN side.

2.6.2   *RegisterTelCPName()*

This action allows a TelCP to register its TelCPName with the *CallManagement* service. The registered TelCPName is only valid for the duration of the output argument *Expires*. Therefore, if the TelCP wants to use the same TCName beyond the duration specified in the output argument *Expires*, the TelCP MUST re-register the TelCPName by invoking this action before the duration expires.

2.6.2.1   Arguments

Table 2-14:   Arguments for *RegisterTelCPName()*

Argument	Direction	relatedStateVariable
TelCPName	*IN*	*A_ARG_TYPE_TelCPName*
CurrentSecretKey	*IN*	*A_ARG_TYPE_SecretKey*
NewSecretKey	*OUT*	*A_ARG_TYPE_SecretKey*
Expires	*OUT*	*A_ARG_TYPE_Expires*

2.6.2.2   Argument Descriptions

The input argument *TelCPName* contains the TelCPName to be registered with the *CallManagement* service. When a TelCP invokes this action for the first time, the input argument *TelCPName* includes the TelCPName which the TelCP wants to use. When a TelCP invokes this action to continue using the same registered TelCPName beyond its expiration, the input argument *TelCPName* includes the previously registered TelCPName.

The input argument *CurrentSecretKey* contains the Secret Key of the TelCP which was assigned to the TelCP from a previous invocation of the action. When a TelCP invokes this action to register a TelCPName for the first time, the value of the input argument *CurrentSecretKey* is the empty string(""). When a TelCP invokes this action to continue using the registered TelCPName, the *CurrentSecretKey* MUST include the unique Secret Key which was assigned to the TelCP from a previous invocation of the action.

The output argument *NewSecretKey* contains the newly assigned Secret Key of the TelCP. When a TelCP invokes this action for the first time, the output argument *NewSecretKey* includes a new Secret Key for the TelCP. When a TelCP invokes this action to continue using the registered TelCPName, the *NewSecretKey* include the same or a different value that the *CallManagement* service previously assigned to the TelCP.

The output argument *Expires* contains the duration for which the TelCPName is valid.

2.6.2.3   Service Requirements

This service MUST check the uniqueness of the TelCPName when a TelCP invokes this action to register a TelCPName.

This service MUST keep track of all registered TelCPNames and the corresponding Secret Key associated with each TelCPName.

When a TelCP invokes this action to register a TelCPName for the first time and this action succeeds, this service MUST event the *TelCPNameList* state variable to notify the current set of existing TelCPNames.

When a TelCP invokes this action to keep using the registered TelCPName, the *CallManagement* service MUST check whether an authorized TelCP is invoking this action by checking the input arguments *TelCPName* and *CurrentSecretKey*.

2.6.2.4   Control Point Requirements When Calling The Action

The TelCP invoke this action when it starts up.

The TelCP MUST invoke this action periodically to keep using the same TelCPName before the duration *Expires* expires.

2.6.2.5   Dependency on Device State

None.

2.6.2.6   Effect on Device State

None.

2.6.2.7   Errors

Table 2-15:   Error Codes for *RegisterTelCPName()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.

ErrorCode	errorDescription	Description
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
702	TelCPName already exists	The specified *NewTelCPName* is already in use.

2.6.3 *UnregisterTelCPName()*

This action allows a TelCP to unregister the TelCPName. If this action is invoked without registering the TelCPName then the action fails with an error code.

2.6.3.1 Arguments

Table 2-16:   Arguments for *UnregisterTelCPName()*

Argument	Direction	relatedStateVariable
TelCPName	*IN*	*A_ARG_TYPE_TelCPName*
SecretKey	*IN*	*A_ARG_TYPE_SecretKey*

2.6.3.2 Argument Descriptions

The input argument *TelCPName* contains the name of the TelCP which invokes this action.

The input argument *SecretKey* contains the Secret Key of the TelCP.

2.6.3.3 Service Requirements

The *CallManagement* service MUST check whether an authorized TelCP is invoking this action by checking the input arguments *TelCPName* and *SecretKey*.

If an authorized TelCP invokes this action, the *CallManagement* service deletes the TelCPName and the Secret Key from the table which manages all the registered TelCPNames and the corresponding Secret Keys. A TelCP without valid TelCPName and Secret Key will not be able to manage a Call.

2.6.3.4 Control Point Requirements When Calling The Action

None.

2.6.3.5 Dependency on Device State

None.

2.6.3.6 Effect on Device State

None.

2.6.3.7   Errors

Table 2-17:   Error Codes for *UnregisterTelCPName()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
712	Invalid Call Status	The action is called when it is not allowed for the Call Status.

2.6.4   *ChangeTelCPName()*

This action allows a TelCP to change the registered TelCPName.

2.6.4.1   Arguments

Table 2-18:   Arguments for *ChangeTelCPName()*

Argument	Direction	relatedStateVariable
CurrentTelCPName	*IN*	*A_ARG_TYPE_TelCPName*
CurrentSecretKey	*IN*	*A_ARG_TYPE_SecretKey*
NewTelCPName	*IN*	*A_ARG_TYPE_TelCPName*
NewSecretKey	*OUT*	*A_ARG_TYPE_SecretKey*
Expires	*OUT*	*A_ARG_TYPE_Expires*

2.6.4.2   Argument Descriptions

The input argument *CurrentTelCPName* contains the current name of the TelCP which invokes this action.

The input argument *CurrentSecretKey* contains the Secret Key of the TelCP.

The input argument *NewTelCPName* contains the new TelCPName which the TelCP wants to register.

The output argument *NewSecretKey* contains the newly assigned Secret Key of the TelCP. It MAY have the same value as the previously assigned Secret Key when the TelCP registered its TelCPName. The value of the output argument *NewSecretKey* MAY be differ from the value which was previously assigned. This is implementation specific.

The output argument *Expires* contains the duration for which the TelCPName is valid.

2.6.4.3   Service Requirements

The *CallManagement* service MUST check whether an authorized TelCP is invoking this action by checking the input arguments *TelCPName* and *SecretKey*.

If an authorized TelCP invokes this action, the *CallManagement* service updates the TelCPName and the Secret Key in the table which manages all the registered TelCPNames and the corresponding Secret Keys.

2.6.4.4 Control Point Requirements When Calling The Action

None.

2.6.4.5 Dependency on Device State

None.

2.6.4.6 Effect on Device State

None.

2.6.4.7 Errors

Table 2-19:   Error Codes for *ChangeTelCPName()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
702	TelCPName already exists.	The specified *NewTelCPName* is already in use.
712	Invalid Call Status	The action is called when it is not allowed for the Call Status.

2.6.5 *GetTelCPNameList()*

This action allows a TelCP to get the TelCPNames of all TelCPs registered with the *CallManagement* service .

2.6.5.1 Arguments

Table 2-20:   Arguments for *GetTelCPNameList ()*

Argument	Direction	relatedStateVariable
TelCPNameList	*OUT*	*A_ARG_TYPE_TelCPNameList*

2.6.5.2 Argument Descriptions

The output argument *TelCPNameList* includes the list of TelCPNames registered with the *CallManagement* service.

2.6.5.3 Service Requirements

This service MUST manage the TelCPNames which are registered by the TelCPs.

2.6.5.4 Control Point Requirements When Calling The Action

None.

2.6.5.5   Dependency on Device State

None.

2.6.5.6   Effect on Device State

None.

2.6.5.7   Errors

Table 2-21:   Error Codes for *GetTelCPNameList ()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
600-699	TBD	See UPnP Device Architecture section on Control.

2.6.6   *GetMediaCapabilities()*

This action returns a set of Media Capabilities supported by the *CallManagement* service. If the input argument *TCMediaCapabilityInfo* contains the empty string(""), this action returns all the Media Capabilities which the *CallManagement* service supports. If the input argument *TCMediaCapabilityInfo* contains a valid value, this action returns the Media Capabilities supported by the *CallManagement* service, which will be a subset of *TCMediaCapabilityInfo*.

2.6.6.1   Arguments

Table 2-22:   Arguments for *GetMediaCapabilities()*

Argument	Direction	relatedStateVariable
TCMediaCapabilityInfo	*IN*	*A_ARG_TYPE_MediaCapabilityInfo*
SupportedMediaCapabilityInfo	*OUT*	*A_ARG_TYPE_MediaCapabilityInfo*

2.6.6.2   Argument Descriptions

The input argument *TCMediaCapabilityInfo* contains either the empty string("") or the Media Capabilities that a TelCP wants to use for a Media Session. For instance, the input argument *TCMediaCapabilityInfo* can contain the output argument of the *MMS::GetMediaCapabilities()* action.

The output argument *SupportedMediaCapabilityInfo* contains the Media Capabilities of the *CallManagement* service. If the input argument *TCMediaCapabilityInfo* contains the empty string(""), this action returns all the Media Capabilities which the *CallManagement* service supports. If the input argument *TCMediaCapabilityInfo* contains a valid value, this action returns the Media Capabilities supported by the *CallManagement* service, which will be a subset of *TCMediaCapabilityInfo*.

2.6.6.3   Service Requirements

This service MUST return the Media Capabilities of the *CallManagement* service regardless of its status.

2.6.6.4 Control Point Requirements When Calling The Action

It is RECOMMENDED to invoke this action before the TelCP invokes the *StartCall()*, *AcceptCall()* or *ModifyCall()* to get the latest Media Capabilities of this service.

2.6.6.5 Dependency on Device State

None.

2.6.6.6 Effect on Device State

None.

2.6.6.7 Errors

Table 2-23:   Error Codes for *GetMediaCapabilities()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
600-699	TBD	See UPnP Device Architecture section on Control.

2.6.7 *StartCall()*

This action starts an outgoing Call. When the *CallManagement* service receives this action, the telephone terminal (e.g. mobile phone, HGW and so on) which has this service starts the new outgoing Call to the Callee. The priority and Media Capabilities of the Call are set by the TelCP and the *CallManagement* service starts the Call using the specified priority and Media Capabilities set by the TelCP. When the *CallMode* is set to "*PHONE-TelCP*", "*DP-TelCP*" or "*DP-User*", this Call is created as a Monopolization Mode Call. When the *CallMode* is set to "*Non-Monopolize*", this Call is created as a Non-Monopolization Mode Call and can be controlled by any other TelCPs other than the TelCP that is starting the Call.

2.6.7.1 Arguments

Table 2-24:   Arguments for *StartCall()*

Argument	Direction	relatedStateVariable
TelCPName	*IN*	*A_ARG_TYPE_TelCPName*
SecretKey	*IN*	*A_ARG_TYPE_SecretKey*
CalleeID	*IN*	*A_ARG_TYPE_CalleeID*
CallPriority	*IN*	*A_ARG_TYPE_CallPriority*
MediaCapabilityInfo	*IN*	*A_ARG_TYPE_MediaCapabilityInfo*
CallMode	*IN*	*A_ARG_TYPE_CallMode*
CallID	*OUT*	*A_ARG_TYPE_CallID*

2.6.7.2 Argument Descriptions

The input argument *TelCPName* contains the name of the TelCP which invokes this action. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

The input argument *SecretKey* contains the Secret Key of the TelCP. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

If the Call is a Non-Monopolization Mode Call or "*DP-TelCP*" or "*DP-User*", the *CallManagement* service MAY ignore the arguments *TelCPName* and *SecretKey*.

The input argument *CalleeID* is the unique ID of the Callee.

The input argument *CallPriority* identifies the priority of the Call.

The input argument *MediaCapabilityInfo* contains the Media Capability information that the TelCP wants to use for starting the Call by this action. The Media Capability in this argument MUST be a subset of the return value of the *GetMediaCapabilities()* action.

The input argument *CallMode* describes the mode of the Call.

The output argument *CallID* is the return value of this action and uniquely identifies the Call. The *CallManagement* service assigns an unique CallID for every Call made through this service.

2.6.7.3   Service Requirements

In the case of a PHONE-Based Monopolized Call, when the *CallManagement* service receives this action, the service MUST check whether an authorized TelCP is invoking this action by checking the *TelCPName* and the *SecretKey*, and if authorized associate the TelCPName as the Monopolizer for this Call.

In the case of a DP-Based Monopolized Call, when the *CallManagement* service receives this action, the service MUST check whether an authorized identity (i.e. TelCP or User) is invoking this action by checking the Control Point Identity (TelCPID) or the Username associated with the TLS connection as defined in *DeviceProtection*, and if authorized associate the TelCPID or the Username as the Monopolizer for this Call. See [TSBP] for more detail.

This service MUST manage the Call Status and Media Capabilities of the Call created by this action. If this action succeeds, the status of this Call is set to "*Dialing*" and the *CallInfo* state variable is evented with the value of the Call Status set to as "*Dialing*". If the Call is a Monopolization Mode Call, the *CallInfo* state variable contains the <callID>, <TelCPNames>, and <callStatus> elements. If the Call is a Non-Monopolization Mode Call, the *CallInfo* state variable contains all the elements.

When the *CallManagement* service receives response from the Callee that the Callee has received the request of creating a new Call but not accepted yet, the Call Status is set to "*Calling*" and the *CallInfo* state variable in evented.

2.6.7.4   Control Point Requirements When Calling The Action

When a TelCP makes a Call using TC(s), the TelCP MUST decide the Media Capability for the Call by comparing the Media Capabilities of the *CallManagement* service and the TC(s). That means the input argument *MediaCapabilityInfo* for the action MUST be the subset of the Media Capabilities of the *CallManagement* service and that of the TC(s).

A TelCP MUST include its *TelCPName* and *SecretKey* as input arguments to initiate a PHONE-Based Monopolized call.

A TelCP MUST invoke the action via TLS tunnel as defined in *DeviceProtection* to initiate a DP-Based Monopolized Call. See [TSBP] for more detail.

A TelCP MUST check whether a User has been logged in or not as defined in *DeviceProtection* before invoking this action to intiate a "*DP-User*" based Monopolized Call. See [TSBP] for more detail.

2.6.7.5   Dependency on Device State

NONE

2.6.7.6 Effect on Device State

NONE

2.6.7.7 Errors

Table 2-25:   Error Codes for *StartCall()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
704	Invalid peerID	The specified peerID is invalid.
705	Invalid priority	The specified priority is invalid.
706	Invalid CallMode	The specified CallMode is invalid.
707	Invalid Media Capability	The specified Media Capability is invalid.
708	Busy	No resource to create a Call is left.
713	Unauthorized Identity	The identity(a TelCP or a user) is not authorized to invoke the action.

2.6.8 *StopCall()*

This action allows a TelCP to terminate an existing Call. When this action is invoked, the *CallManagement* service terminates the Call identified by the input argument *CallID*. If succeeds, this service stops sending and/or receiving the Media Streams and releases the relevant resources (e.g. CallID, priority, Media Capability etc.).

If the Call is a Monopolization Mode Call, the *CallManagement* service MUST check whether the TelCP is authorized to stop the Call. In the case of "*PHONE-TelCP*", the *CallManagement* service checks the value of the input arguments *TelCPName* and *SecretKey* supplied by the TelCP and if they match with the values stored for the TelCP in the *CallManagement* service then the action will succeed.

2.6.8.1 Arguments

Table 2-26:   Arguments for *StopCall()*

Argument	Direction	relatedStateVariable
TelCPName	*IN*	*A_ARG_TYPE_TelCPName*
SecretKey	*IN*	*A_ARG_TYPE_SecretKey*
CallID	*IN*	*A_ARG_TYPECallID*

2.6.8.2 Argument Descriptions

The input argument *TelCPName* contains the name of the TelCP which invokes this action. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

The input argument *SecretKey* contains the Secret Key of the TelCP. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

If the Call is a "*PHONE-TelCP*", these two arguments MUST be equal to the TelCPName and Secret Key of the TelCP which created this Call.

If the Call is a Non-Monopolization Mode Call or "*DP-TelCP*" or "*DP-User*", the *CallManagement* service MAY ignore the arguments *TelCPName* and *SecretKey*.

The argument *CallID* contains the CallID of the Call that the TelCP wants to terminate.

2.6.8.3 Service Requirements

When the *CallManagement* service receives this action for a "*PHONE-TelCP*" based Monopolized Call, the service MUST check whethter the correct TelCP is invoking this action by checking the input arguments *TelCPName* and *SecretKey*. This action will succeed if the *TelCPName* and *SecretKey* provided in the input arguments are correspond to the Monopolizer of this Call.

When the *CallManagement* service receives this action for a "*DP-TelCP*" based Monopolized Call, the service MUST check whethter the correct TelCP is invoking this action by checking the Control Point Identity (TelCPID) associated with the TLS connection as defined in *DeviceProtection*. This action will succeed if the TelCPID corresponds to the Monopolizer of this Call. See [TSBP] for more detail.

When the *CallManagement* service receives this action for a "*DP-User*" based Monopolized Call, the service MUST check whethter the correct User controlling the TelCP is invoking this action by checking the Username associated with the TLS connection as defined in *DeviceProtection*. This action will succeed if the Username corresponds to the the Monopolizer of this Call. See [TSBP] for more detail.

If the action succeeds then the status of the Call changes to "*Disconnected*" and the *CallInfo* state variable gets evented. Once a Call is stopped, the *CallManagement* service MUST release all the resources related to the Call (e.g CallID, Media Capabilities etc.)

2.6.8.4 Control Point Requirements When Calling The Action

Once a Call is stopped, the TelCP MUST also stop the Media Sessions on the TC side for the Call. The TelCP then MUST release all the resources related with the Call. (e.g CallID, Media Capabilities and so on.)

A TelCP MUST include its *TelCPName* and *SecretKey* as input arguments to terminate a PHONE-Based Monopolized Call.

A TelCP MUST invoke the action via TLS tunnel as defined in *DeviceProtection* to terminate a DP-Based Monopolized Call. See [TSBP] for more detail.

A TelCP MUST check whether a User has been logged in or not as defined in *DeviceProtection* before invoking this action to terminate a "*DP-User*" based Monopolized Call. See [TSBP] for more detail.

2.6.8.5 Dependency on Device State

None

2.6.8.6 Effect on Device State

None

2.6.8.7　Errors

Table 2-27:　Error Codes for *StopCall()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
703	Invalid CallID	The specified *CallID* is invalid.
712	Invalid Call Status	The action is called when it is not allowed for the Call Status.
713	Unauthorized Identity	The identity(a TelCP or a user) is not authorized to invoke the action.

2.6.9　*AcceptCall()*

This action allows a TelCP to accept an incoming Call. The input argument *TargetCallID* indentifies the incoming Call. And the input argument *MediaCapabilityInfo* specifies the Media Capabilities of the Call. If the action succeeds, the *CallManagement* service establishes the Call between the Caller and the Callee using the Media Capabilities specified by the input argument *MediaCapabilityInfo*.

If *CallMode* is set to as "*PHONE-TelCP*", "*DP-TelCP*" or "*DP-User*", then this Call is created as a Monopolization Mode Call. If *CallMode* is set to as "*Non-Monopolize*", then this Call is created as a Non-Monopolization Mode Call.

2.6.9.1　Arguments

Table 2-28:　Arguments for *AcceptCall()*

Argument	Direction	relatedStateVariable
TelCPName	*IN*	*A_ARG_TYPE_TelCPName*
SecretKey	*IN*	*A_ARG_TYPE_SecretKey*
TargetCallID	*IN*	*A_ARG_TYPE_CallID*
MediaCapabilityInfo	*IN*	*A_ARG_TYPE_MediaCapabilityInfo*
CallMode	*IN*	*A_ARG_TYPE_CallMode*

2.6.9.2　Argument Descriptions

The input argument *TelCPName* contains the name of the TelCP which invokes this action. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

The input argument *SecretKey* contains the Secret Key of the TelCP. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

If the Call is a Non-Monopolization Mode Call or "*DP-TelCP*" or "*DP-User*", the *CallManagement* service MAY ignore the arguments *TelCPName* and *SecretKey*.

The inut argument *TargetCallID* indentifies the Call to be accepted.

The input argument *MediaCapabilityInfo* contains the Media Capabilities to be used for the Call. The Media Capabilities in this argument MUST be a subset of the values of the <mediaCapability> element in the *CallInfo* state variable .

The input argument *CallMode* describes the mode of the Call. If the TelCP makes the Call as a Monopolization Mode Call, then the value of this argument is set to as "*PHONE-TelCP*", "*DP-TelCP*" or "*DP-User*". If the TelCP makes the Call as a Non-Monopolization Mode Call, then the value of this argument is set to as "*Non-Monopolize*".

2.6.9.3   Service Requirements

When the *CallManagement* service receives an incoming Call, this service MUST event the *CallInfo* state variable with the value of the <callStatus> element set to as "*Ringing*".

If the CallInfo state variable includes TelCPName(s) in the <targetNames> element for this Call, the *CallManagement* service MUST check whether an authorized TelCP is invoking this action by checking if the values of the *TelCPName* and the *SecretKey* input arguments are correspond to the authorized TelCP.

When the CallInfo state variable includes TelCPID(s) or Username(s) in the <targetNames> element, then the *CallManagement* service MUST check whether an authorized TelCP or an authorize User controlling the TelCP is invoking this action. The *CallManagement* Service MUST check if the Control Point Identity or Username associated with the TLS connection as defined in *DeviceProtection* is listed in the <targetNames> element of the CallInfo state varlable for the Call. See [TSBP] for more detail.

In the case of a Monopolization Mode Call, when the *CallManagement* service receives this action, the service MUST check whether an authorized TelCP is invoking this action. In the case of PHONE-Based Monopolization, the service checks the input arguments *TelCPName* and the *SecretKey*, and if authorized then associate the *TelCPName* as the Monopolizer for the Call. In the case of "*DP-TelCP*" or "*DP-User*", this service checks the Control Point Identity (TelCPID) or Username associated with the TLS connection as defined in *DeviceProtection*, and then associate the TelCPID or Username as an Monopolizer for the Call. See [TSBP] for more detail.

If the Call is a Monopolization Mode Call, the *CallManagement* service MUST keep track of the identity (i.e. a TelCP or a User identified by *TelCPName*, TelCPID or Username) which is accepting the Call.

If the Call is established between the Caller and the Callee, then the *CallManagement* service MUST event *CallInfo* state variable with the <callStatus> element set to as "*Connected*" and the <mediaCapability> element set to as the value of Media Capabilities of the connected Call.

2.6.9.4   Control Point Requirements When Calling The Action

The TelCP MUST keep track of the CallID of the accepted Call. The TelCP can use this CallID to control the Call.

After receiving the *CallInfo* event with TelCPName(s) in the <targetNames> element, and/or when the TelCP wants to Monopolize the Call using Phone-Based Monopolization mechanism, then the TelCP MUST include the *TelCPName* and *SecretKey* as input arguments to accept the Call.

After receiving the *CallInfo* event with TelCPID(s) in the <targetNames> element, and/or when the TelCP wants to Monopolize the Call using "*DP-TelCP*" based Monopolization mechanism, then the TelCP MUST invoke the action via TLS tunnel as defined in *DeviceProtection* to accept the Call. See [TSBP] for more detail.

After receiving the *CallInfo* event with Username(s) in the <targetNames> element, and/or when the TelCP wants to Monopolize the Call using "*DP-User*" based Monopolization mechanism then the TelCP MUST check whether a User has been logged in or not as defined in *DeviceProtection* before invoking the action to accept the Call. See [TSBP] for more detail.

2.6.9.5 Dependency on Device State
None

2.6.9.6 Effect on Device State
None

2.6.9.7 Errors

Table 2-29:   Error Codes for *AcceptCall()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
600-699	TBD	See UPnP Device Architecture section on Control.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
703	Invalid CallID	The specified *TargetCallID* is invalid. The value of *TargetCallID* MUST be the same as the value of <callID> element in the *CallInfo* state variable.
706	Invalid CallMode	The specified *CallMode* is invalid.
707	Invalid Media Capability	The specified Media Capability is invalid.
712	Invalid Call Status	The action is called when it is not allowed for the Call Status.
713	Unauthorized Identity	The identity(a TelCP or a user) is not authorized to invoke the action.

2.6.10 *RejectCall()*

This action allows a TelCP to reject an incoming Call or to reject a request to modify the Media Capabilities of an existing Call. The input argument *TargetCallID* identifies the Call to be rejected.

2.6.10.1 Arguments

Table 2-30:   Arguments for *RejectCall()*

Argument	Direction	relatedStateVariable
TelCPName	*IN*	*A_ARG_TYPE_TelCPName*
SecretKey	*IN*	*A_ARG_TYPE_SecretKey*
TargetCallID	*IN*	*A_ARG_TYPE_CallID*
RejectReason	*IN*	*A_ARG_TYPE_RejectReason*

2.6.10.2 Argument Descriptions

The input argument *TelCPName* contains the name of the TelCP which invokes this action. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

The input argument *SecretKey* contains the Secret Key for the TelCP. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

In the case of "*PHONE-TelCP*", a TelCP with the correct values of the *TelCPName* and the *SecretKey* can only reject the Call.

If the Call is a Non-Monopolization Mode Call or "*DP-TelCP*" or "*DP-User*", the *CallManagement* service MAY ignore the arguments *TelCPName* and *SecretKey*.

The input argument *TargetCallID* identifies the Call to be rejected.

The input argument *RejectReason* describes the reason for rejecting the incoming Call or the request to modify the existing Call.

2.6.10.3 Service Requirements

Once the action succeeds, the *CallManagement* service MUST event the *CallInfo* state variable. In the case of rejecting an incoming Call, the value of the <callStatus> element in the *CallInfo* state variable set to as "*Disconnected*" and the value of the reason attribute set to as "*Rejected*". Once the Call is rejected, the *CallManagement* service deletes all the resources associated with the Call.

If the *CallInfo* state variable includes the TelCPName(s) in the <targetNames> element, then the *CallManagement* service MUST check whether an authorized TelCP is invoking this action by checking if the value of the *TelCPName* and the *SecretKey* input arguments are correspond to the authorized TelCP.

When the CallInfo state variable includes TelCPID(s) or Username(s) in the <targetNames> element, the *CallManagement* service MUST check whether an authorized TelCP or an authorize User controlling the TelCP is invoking this action by checking if the Control Point Identity or Username associated with the TLS connection as defined in *DeviceProtection* is listed in the <targetNames> element of the CallInfo state varlable for this Call. See [TSBP] for more detail.

In the case of rejecting an incoming modify request for an existing Phone-Based Monopolized Call, the *CallManagement* service MUST check whether an authorized TelCP is invoking this action by checking if the values of the *TelCPName* and *SecretKey* are corresponds to the Monopolizer of the call

In the case of rejecting an incoming modify request for an existing "*DP-TelCP*" or "*DP-User*" based Monopolized Call,, the *CallManagement* service MUST check whether an authorized TelCP or a User controlling a TelCP is invoking this action by checking if the Control Point Identity or the Username associated with the TLS connection as defined in *DeviceProtecton* is corresponds to the Monopolizer of the call. See [TSBP] for more detail.

In the case of rejecting a request to modify an existing Call, the value of the <callStatus> element in the *CallInfo* state variable set to as "*ModifyFailed*" and the value of the reason attribute set to as "*Rejected*". If the request to modify an existing Call is rejected, the Call continues without any changes to the Media Capabilities.

2.6.10.4 Control Point Requirements When Calling The Action

Once the incoming Call is rejected, the TelCP deletes all the resources associated with the Call.

If the request to modify an existing Call is rejected, the Call continues without any changes to the Media Capabilities.

If TelCP wants to reject an incoming call request after receiving the *CallInfo* event with TelCPName(s) in the <targetNames> element for that incoming call or if TelCP wants to reject an incoming modify request for an existing PHONE-Based Monopolized Call, then TelCP MUST include the *TelCPName* and the *SecretKey* input arguments in this action.

If TelCP wants to reject an incoming call request after receiving the *CallInfo* event with TelCPName(s) in the <targetNames> element for that incoming call or if TelCP wants to reject an incoming modify request

for an existing "*DP-TelCP*" based Monopolized Call, then the TelCP MUST invoke this action via TLS tunnel as defined in *DeviceProtection*. See [TSBP] for more detail.

If TelCP wants to reject an incoming call request after receiving the *CallInfo* event with Username(s) in the <targetNames> element for that incoming call or if TelCP wants to reject an incoming modify request for an existing "*DP-User*" based Monopolized Call, then the TelCP MUST check whether a User has been logged in or not as defined in *DeviceProtection*. See [TSBP] for more detail

2.6.10.5 Dependency on Device State

None

2.6.10.6 Effect on Device State

None

2.6.10.7 Errors

Table 2-31:   Error Codes for *RejectCall()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
703	Invalid CallID	The specified *CallID* is invalid.
712	Invalid Call Status	The action is called when it is not allowed for the Call Status.
713	Unauthorized Identity	The identity(a TelCP or a user) is not authorized to invoke the action.

2.6.11 *ModifyCall()*

This action allows a TelCP to request to modify the Media Capabilities of an existing Call for the Remote Party. If the Remote Party accepts the request, the Media Capabilities of the Call identified by the CallID will be to changed to the new Media Capabilities.

The *ModifyCall()* action can perform the following functions:

- Requesting to add a new Media Stream to the Call. (e.g., changing audio Call to video Call by adding a video stream.)

- Requesting to delete an existing Media Stream from the Call. (e.g., changing video Call to audio Call by deleting a video stream.)

- Request to change the Media Capabilities such as media codec parameters. (e.g., changing the framerate of the video stream in a video Call.)

2.6.11.1 Arguments

Table 2-32:　Arguments for *ModifyCall()*

Argument	Direction	relatedStateVariable
TelCPName	*IN*	*A_ARG_TYPE_TelCPName*
SecretKey	*IN*	*A_ARG_TYPE_SecretKey*
TargetCallID	*IN*	*A_ARG_TYPE_CallID*
MediaCapabilityInfo	*IN*	*A_ARG_TYPE_MediaCapabilityInfo*

2.6.11.2 Argument Descriptions

The input argument *TelCPName* contains the name of the TelCP which invokes this action. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

The input argument *SecretKey* contains the Secret Key of the TelCP. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

If the Call is a Non-Monopolization Mode Call or "*DP-TelCP*" or "*DP-User*", the *CallManagement* service MAY ignore the arguments *TelCPName* and *SecretKey*.

The input argument *TargetCallID* indentifies the Call to be modified.

The input argument *MediaCapabilityInfo* contains the new Media Capabilities for the Call.

2.6.11.3 Service Requirements

Once the action succeeds, the *CallManagement* service MUST event the *CallInfo* state variable with the value of the <callStatus> element set to as "*SendingModifyRequest*"

Once the modification of the Media Capabilities are accepted by the Remote Party in the WAN side, this service MUST notify the *CallInfo* state variable with the value of the <callStatus> element set to as "*Modified*". If the modification of the Media Capabilities are rejected by the WAN side, then the service MUST notify the *CallInfo* state variable with the value of the <callStatus> element set to as "*ModifyFailed*".

When the *CallManagement* service receives this action for a "*PHONE-TelCP*" based Monopolized Call, then the service MUST check whether the correct TelCP is invoking this action by checking the input arguments *TelCPName* and *SecretKey* of this action. This action will succeed if the *TelCPName* and *SecretKey* are correspond to the Monopolizer of this Call.

When the *CallManagement* service receives this action for a "*DP-TelCP*" based Monopolized Call, then the service MUST check whethter the correct TelCP is invoking this action by checking the Control Point Identity (TelCPID) associated with the TLS connection as defined in *DeviceProtection*. This action will succeed if the TelCPID corresponds to the Monopolizer of this Call.

When the *CallManagement* service receives this action for a "*DP-User*" based Monopolized Call, then the service MUST check whethter the correct User controlling the TelCP is invoking this action by checking the Username associated with the TLS connection as defined in *DeviceProtection*. This action will succeed if the Username correponds to the Monopolizer of this Call. See [TSBP] for the more detail.

2.6.11.4 Control Point Requirements When Calling The Action

Once the TelCP receives an event for the *CallInfo* state variable with the <callStatus> element set to as "*Modified*", or "*ModifyFailed*", the TelCP MUST invoke the *StartMediaTransfer()* action to update the Media Session as the result of the *ModifyCall()* action.

A TelCP MUST include the *TelCPName* and *SecretKey* as input arguments when invoking this action to modify a "*PHONE-TelCP*" based Monopolized Call.

A TelCP MUST invoke the action via TLS tunnel as defined in *DeviceProtection* to modify a "*DP-TelCP*" or "*DP-User*" based Monopolized Call. See [TSBP] for more detail.

A TelCP MUST check whether a User has been logged in or not as defined in *DeviceProtection* before invoking this action to modify a "*DP-User*" based Monopolized Call. See [TSBP] for more detail.

2.6.11.5 Dependency on Device State

None

2.6.11.6 Effect on Device State

None

2.6.11.7 Errors

Table 2-33: Error Codes for *ModifyCall()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
703	Invalid CallID	The specified *CallID* is invalid.
707	Invalid Media Capability	The specified Media Capability is invalid.
712	Invalid Call Status	The action is called when it is not allowed for the Call Status.
713	Unauthorized Identity	The identity(a TelCP or a user) is not authorized to invoke the action.

2.6.12 *AcceptModifyCall()*

This action allows a TelCP to accept a request from the Remote Party to modify the Media Capabilities of an existing Call. If the TelCP accepts the request, the Media Capabilities of the Call identified by the CallID will be changed to the new Media Capabilities.

The *AcceptModifyCall()* action can perform the following functions:

- Accepting a request of adding a new Media Stream to the Call. (e.g., changing audio Call to video Call by adding a video stream.)

- Accepting a request of deleting an existing Media Stream from the Call. (e.g., changing video Call to audio Call by deleting a video stream.)

- Accepting a request of changing the Media Capabilities such as media codec parameters. (e.g., changing the framerate of the video stream in a video Call.)

2.6.12.1 Arguments

Table 2-34:   Arguments for *AcceptModifyCall()*

Argument	Direction	relatedStateVariable
TelCPName	*IN*	*A_ARG_TYPE_TelCPName*
SecretKey	*IN*	*A_ARG_TYPE_SecretKey*
TargetCallID	*IN*	*A_ARG_TYPE_CallID*
MediaCapabilityInfo	*IN*	*A_ARG_TYPE_MediaCapabilityInfo*

2.6.12.2 Argument Descriptions

The input argument *TelCPName* contains the name of the TelCP which invokes this action. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

The input argument *SecretKey* contains the Secret Key of the TelCP. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

If the Call is a Non-Monopolization Mode Call or "*DP-TelCP*" or "*DP-User*", the *CallManagement* service MAY ignore the arguments *TelCPName* and *SecretKey*.

The input argument *TargetCallID* indentifies the Call to be modified.

The input argument *MediaCapabilityInfo* contains the new Media Capabilities for the Call.

2.6.12.3 Service Requirements

When the *CallManagement* service receives the request of modifying the Media Capabilities of an existing Call, the *CallManagement* service MUST event the *CallInfo* state variable with the value of the <callStatus> element set to as "*ReceivingModifyRequest*"

Once the modification of the Media Capabilities are accepted by the TelCP in the WAN side, this service MUST notify the *CallInfo* state variable with the value of the <callStatus> element set to as "*Modified*". If the modification of the Media Capabilities are rejected by the WAN side, then the service MUST notify the *CallInfo* state variable with the value of the <callStatus> element set to as "*ModifyFailed*".

When the *CallManagement* service receives this action for a "*PHONE-TelCP*" based Monopolized Call, then the service MUST check whether the correct TelCP is invoking this action by checking the input arguments *TelCPName* and *SecretKey* of this action. This action will succeed if the *TelCPName* and *SecretKey* are correspond to the Monopolizer of the Call.

When the *CallManagement* service receives this action for a "*DP-TelCP*" based Monopolized Call, then the service MUST check whethter the correct TelCP is invoking this action by checking the Control Point Identity (TelCPID) associated with the TLS connection as defined in *DeviceProtection*. This action will succeed if the TelCPID corresponds to the Monopolizer of the Call.

When the *CallManagement* service receives this action for a "*DP-User*" based Monopolized Call, then the service MUST check whethter the correct User controlling the TelCP is invoking this action by checking the Username associated with the TLS connection as defined in *DeviceProtection*. This action will succeed if the Username correponds to the Monopolizer of the Call. See [TSBP] for the more detail.

2.6.12.4 Control Point Requirements When Calling The Action

Once the TelCP receives an event for the *CallInfo* state variable with the <callStatus> element set to as "*Modified*", or "*ModifyFailed*", the TelCP MUST invoke the *StartMediaTransfer()* action to update the Media Session as the result of the *AcceptModifyCall()* action.

A TelCP MUST include the *TelCPName* and *SecretKey* as input arguments when invoking this action to accept the modify request for an existing "*PHONE-TelCP*" based Monopolized Call.

A TelCP MUST invoke the action via TLS tunnel as defined in *DeviceProtection* to accept the modify request for an existing "*DP-TelCP*" or "*DP-User*" based Monopolized Call. See [TSBP] for more detail.

A TelCP MUST check whether a User has been logged in or not as defined in *DeviceProtection* before invoking this action to accept the modify request for an existing "*DP-User*" based Monopolized Call. See [TSBP] for more detail.

2.6.12.5 Dependency on Device State
None

2.6.12.6 Effect on Device State
None

2.6.12.7 Errors

Table 2-35:   Error Codes for *AcceptModifyCall()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
700		Reserved for future extensions.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
703	Invalid CallID	The specified *CallID* is invalid.
707	Invalid Media Capability	The specified Media Capability is invalid.
712	Invalid Call Status	The action is called when it is not allowed for the Call Status.
713	Unauthorized Identity	The identity(a TelCP or a user) is not authorized to invoke the action.

2.6.13 *StartMediaTransfer()*
This action is used to allow a TelCP to request the *CallManagement* service to start transferring Media Streams. If this action succeeds, then the Caller or the Callee starts transferring the media.

2.6.13.1 Arguments

Table 2-36:   Arguments for *StartMediaTransfer()*

Argument	Direction	relatedStateVariable
TelCPName	*IN*	*A_ARG_TYPE_TelCPNamel*
SecretKey	*IN*	*A_ARG_TYPE_SecretKey*

Argument	Direction	relatedStateVariable
TargetCallID	*IN*	*A_ARG_TYPE_CallID*
TCList	*IN*	*A_ARG_TYPE_TCList*
MediaCapabilityInfo	*IN*	*A_ARG_TYPE_MediaCapabilityInfo*

2.6.13.2 Argument Descriptions

The input argument *TelCPName* contains the name of the TelCP which invokes this action. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

The input argument *SecretKey* contains the Secret Key of the TelCP. If the mode of the Call is not "*PHONE-TelCP*", the value of this input argument can be set to the empty string("").

If the Call is a Non-Monopolization Mode Call or "*DP-TelCP*" or "*DP-User*", the *CallManagement* service MAY ignore the arguments *TelCPName* and *SecretKey*.

The input argument *TargetCallID* indentifies the Call.

The argument *TCList* contains the list of the TCs associated with the Call.

The input argument *MediaCapabilityInfo* contains the Media Capabilities for the Call.

2.6.13.3 Service Requirements

After this action succeeds, the *CallManagement* service starts sending and/or receiving Media Streams to or from the TC(s). The *CallManagement* service also events the *CallInfo* state variable with the value of the <callStatus> element set to as "*Talking*".

When the *CallManagement* service receives this action for a "*PHONE-TelCP*" based Monopolized Call, then the service MUST check whether the correct TelCP is invoking this action by checking the input arguments *TelCPName* and *SecretKey* of this action. This action will succeed if the *TelCPName* and *SecretKey* are correspond to the Monopolizer of the Call.

When the *CallManagement* service receives this action for a "*DP-TelCP*" based Monopolized Call, then the service MUST check whethter the correct TelCP is invoking this action by checking the Control Point Identity (TelCPID) associated with the TLS connection as defined in *DeviceProtection*. This action will succeed if the TelCPID corresponds to the Monopolizer of the Call.

When the *CallManagement* service receives this action for a "*DP-User*" based Monopolized Call, then the service MUST check whethter the correct User controlling the TelCP is invoking this action by checking the Username associated with the TLS connection as defined in *DeviceProtection*. This action will succeed if the Username correponds to the Monopolizer of the Call. See [TSBP] for the more detail.

2.6.13.4 Control Point Requirements When Calling The Action

The TelCP MUST invoke this action after receiving an event for the *CallInfo* state variable with the value of the <callStatus> element set to as either "*Connected*" or, "*Modified*" or, "*ModifyFailed*".

A TelCP MUST include the *TelCPName* and *SecretKey* as input arguments when invoking this action to start the media transfer between TS and TC for the "*PHONE-TelCP*" based Monopolized Call.

A TelCP MUST invoke the action via TLS tunnel as defined in *DeviceProtection* to to start the media transfer between TS and TC for the "*DP-TelCP*" or "*DP-User*" based Monopolized Call. See [TSBP] for more detail.

A TelCP MUST check whether a User has been logged in or not as defined in *DeviceProtection* before invoking this action to start the media transfer between TS and TC for the "*DP-User*" based Monopolized Call. See [TSBP] for more detail.

2.6.13.5 Dependency on Device State
None

2.6.13.6 Effect on Device State
None

2.6.13.7 Errors

Table 2-37:   Error Codes for *StartMediaTransfer()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
703	Invalid CallID	The specified *CallID* is invalid.
707	Invalid Media Capability	The specified Media Capability is invalid.
712	Invalid Call Status	The action is called when it is not allowed for the Call Status.

2.6.14 *ChangeMonopolizer()*

This action allows to change the control of a Monopolize Mode Call. In the case of a Monopolization Mode Call, the TelCP that established the Call can only manage the Call. Therefore, this action is used to change the owner of the Call from one TelCP to another.

2.6.14.1 Arguments

Table 2-38:   Arguments for *ChangeMonopolizer()*

Argument	Direction	relatedStateVariable
CurrentMonopolizer	*IN*	*A_ARG_TYPE_TelCPName*
SecretKey	*IN*	*A_ARG_TYPE_SecretKey*
CallID	*IN*	*A_ARG_TYPE_CallID*
NewMonopolizer	*IN*	*A_ARG_TYPE_TelCPName*

2.6.14.2 Argument Descriptions

The input argument *CurentMonopolizer* contains the name of the TelCP which invokes this action.

The input argument *SecretKey* contains the Secret Key of the current TelCP whose TelCPName is identified by the input argument *CurrentMonopolizer*.

The input argument *CallID* indentifies the Call.

The input argument *NewMonopolizer* identifies the new TelCP that will get the control of the Call.

2.6.14.3 Service Requirements

When the *CallManagement* service receives this action for a "*PHONE-TelCP*" Based Monopolized Call, the service MUST check whethter the correct TelCP is invoking this action by checking the input arguments *CurrentMonopolizer* and *SecretKey*. This action will succeed if the *TelCPName* and *SecretKey* are correponds to the Monopolizer of the call..

If succeeds, the TelCP as identified by the input argument *NewMonopolizer* will get the ownership of the Call and will be able to manage the Call. This service sends the *CallInfo* event with the value of the <targetNames> element set to the value of the input argument *NewMonopolizer*.

2.6.14.4 Control Point Requirements When Calling The Action

A TelCP MUST NOT invoke this action when the value of the Call Status is "*Ringing*".

A TelCP MUST provide its *TelCPName* and the *SecretKey* as input arguments when invoking this action to switch the Monopolizer of a "*PHONE-TelCP*" Based Monopolized Call.

2.6.14.5 Dependency on Device State

None

2.6.14.6 Effect on Device State

None

2.6.14.7 Errors

Table 2-39:   Error Codes for *ChangeMonopolizer()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
703	Invalid CallID	The specified *CallID* is invalid. e.g. CallID does not exist, a Call which CallID is the same as the value of *TargetCallID* is not a Monopolization Mode Call.
707	Invalid Media Capability	The specified Media Capability is invalid.
710	Invalid NewMonopolizer	The specified *NewMonopolizer* is invalid.
712	Invalid Call Status	The action is called when it is not allowed for the Call Status.
713	Unauthorized Identity	The identity(a TelCP or a user) is not authorized to invoke the action.

2.6.15 *InitiateCall()*

This action allows a TelCP to initiate an outgoing Call to a Callee identified by the input argument *CalleeID*. The TelCP only initiates the Call at the TS to the Callee. However this Call is not managed by the UPnP Telephony functionalities. The TS does not establish any Media Sessions with any TC in the home network for this particular Call.

2.6.15.1 Arguments

Table 2-40:   Arguments for *InitiateCall()*

Argument	Direction	relatedStateVariable
CalleeID	*IN*	*A_ARG_TYPE_CalleeID*
CallID	*OUT*	*A_ARG_TYPE_CallID*

2.6.15.2 Argument Descriptions

The input argument *CalleeID* contains the identity of the Callee.

The output argument *CallID* is the return value of this action and uniquely identifies the Call. The *CallManagement* service assigns a unique CallID for every Call made through this service.

2.6.15.3 Service Requirements

The *CallManagement* service MAY event the *CallInfo* state variable for the status of the Call which is initiated by this action.

2.6.15.4 Control Point Requirements When Calling The Action

None

2.6.15.5 Dependency on Device State

None

2.6.15.6 Effect on Device State

None

2.6.15.7 Errors

Table 2-41:   Error Codes for *InitiateCall()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
709	Invalid CalleeID	The specified *CalleeID* is invalid.

2.6.16 *GetCallInfo()*

This action allows a TelCP to get information about existing Calls. If the input argument *TargetCallID* contains the empty string(""), this action returns information about all the existing Calls such as CallID, Call Status, Media Capabilities etc. If the value of the input argument *TargetCallID* contains a valid CallID, then the action returns information about that specific Call.

2.6.16.1 Arguments

Table 2-42:   Arguments for *GetCallInfo()*

Argument	Direction	relatedStateVariable
TelCPName	*IN*	*A_ARG_TYPE_TelCPName*
SecretKey	*IN*	*A_ARG_TYPE_SecretKey*
TargetCallID	*IN*	*A_ARG_TYPE_CallID*
CallInfoList	*OUT*	*A_ARG_TYPE_CallInfoList*

2.6.16.2 Argument Descriptions

The input argument *TelCPName* contains the name of the TelCP which invokes this action or the empty string("").

The input argument *SecretKey* contains the Secret Key of the TelCP or the empty string("").

If the TelCP wants to get the information of the Call which mode is "*PHONE-TelCP*", the input arguments *TelCPName* and *SecretKey* MUST contain the TelCPName and Secret Key which are related to the Monopolization Mode Call. Otherwise, the input arguments *TelCPName* and *SecretKey* MAY contain the empty string("").

The input argument *TargetCallID* indentifies a specific Call or the empty string("").

If the value of the input argument *TargetCallID* contains a valid CallID, the output argument *CallInfoList* contains information about the Call specified by *TargetCallID*. If the value of *TargetCallID* is the empty string (""), then the output argument *CallInfoList* contains informaion about all the Calls which are being managed by the *CallManagement* service.

2.6.16.3 Service Requirements

If the Call is managed by the *CallManagement* service in a Monopolization mode, then the *CallManagement* service returns only a subset of information such as the <callID>, <TelCPNames>, and <callStatus> elements in the *CallInfo* state variable. However, if the action is invoked by the TelCP or the User controlling the TelCP which is the Monopolizer of the Call, then the *CallManagement* service returns all the elements of the *CallInfo* state variable.

2.6.16.4 Control Point Requirements When Calling The Action

A TelCP MUST include the *TelCPName* and *SecretKey* as input arguments when invoking this action to retrieve complete information of the Call.

A TelCP MUST invoke the action via TLS tunnel as defined in *DeviceProtection* to retrieve the complete information of the Call for the "*DP-TelCP*" or "*DP-User*" based Monopolized Call. See [TSBP] for more detail.

A TelCP MUST check whether a User has been logged in or not as defined in *DeviceProtection* before invoking this action for the "*DP-User*" based Monopolized Call. See [TSBP] for more detail.

2.6.16.5 Dependency on Device State

None

2.6.16.6 Effect on Device State

None

2.6.16.7 Errors

Table 2-43: Error Codes for *GetCallInfo()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
701	Invalid TelCP	The specified *TelCPName* or *SecretKey* is invalid.
703	Invalid CallID	The specified *CallID* is invalid.
713	Unauthorized Identity	The identity(a TelCP or a user) is not authorized to invoke the action.

2.6.17 *GetCallLogs()*

This action allows a TelCP to retrieve the logs of all the Calls managed by the *CallMangement* service. The log information contains the identification of the Caller and the Callee, the time and duration of the Calls, and the types of the Calls etc. The *CallManagement* service keeps tracks of the logs for all the Calls managed by the *CallManagement* service until the logs are cleared, and returns the logs as the output argument of this action. The logs can be cleared by the *CallManagement* service when it reaches the maximum limit. The policy and the size of the limit are implementation specific. The logs can be cleared by a TelCP by the invocation of the *ClearCallLogs()* action.

2.6.17.1 Arguments

Table 2-44: Arguments for *GetCallLogs()*

Argument	Direction	relatedStateVariable
CallLogs	*OUT*	*A_ARG_TYPE_CallLogs*

2.6.17.2 Argument Descriptions

The input argument *CallLogs* contains the logs of all the Calls. If the *CallLogs* is empty, then the output argument includes the XML fragment of type *CallLogs* without any *CallLog* elements.

2.6.17.3 Service Requirements

None.

2.6.17.4 Control Point Requirements When Calling The Action

None.

2.6.17.5 Dependency on Device State

None.

2.6.17.6 Effect on Device State

None.

2.6.17.7 Errors

Table 2-45:   Error Codes for *GetCallLogs()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.

2.6.18 *ClearCallLogs()*

This action allows a TelCP to clear the logs of all the Calls managed by the *CallManagement* service. This includes all incoming, outgoing, and missed Calls managed by the *CallManagement* service. The *CallManagemenet* service will start keeping new logs for Calls managed by the *CallManagement* service since the invocation of this action.

2.6.18.1 Arguments

Table 2-46:   Arguments for *ClearCallLogs()*

Argument	Direction	relatedStateVariable

2.6.18.2 Argument Descriptions

None.

2.6.18.3 Service Requirements

None.

2.6.18.4 Control Point Requirements When Calling The Action

None.

2.6.18.5 Dependency on Device State

None.

2.6.18.6 Effect on Device State

None.

2.6.18.7 Errors

Table 2-47:   Error Codes for *ClearCallLogs()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.

2.6.19 *RegisterCallBack()*

This action allows a TelCP to register a Call back with the *CallManagement* service. If succeeds, the action returns an ID that uniquely identifies the Call back. If the Call back is already registered before for the Callee, then this action still succeed without any changes in the Call back information.

2.6.19.1 Arguments

Table 2-48:   Arguments for *RegisterCallBack()*

Argument	Direction	relatedStateVariable
CalleeID	*IN*	*A_ARG_TYPE_CalleeID*
CallBackID	*OUT*	*A_ARG_TYPE_CallBackID*

2.6.19.2 Argument Descriptions

The input argument *CalleeID* uniquely identify the Callee.

The output argument *CallBackID* uniquely identifies the Call back which is being registered with the *CallManagement* service by the invocation of this action.

2.6.19.3 Service Requirements

None.

2.6.19.4 Control Point Requirements When Calling The Action

None.

2.6.19.5 Dependency on Device State

None.

2.6.19.6 Effect on Device State

None.

2.6.19.7 Errors

Table 2-49:   Error Codes for *RegisterCallBack()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
709	Invalid CalleeID	The specified *CalleeID* is invalid.

2.6.20 *ClearCallBack()*

This action allows a TelCP to clear a Call back registered with the *CallManagement* service. The *CallBackID* identifies the Call back that will be cleared. The action will fail with an error code if the specified *CallBackID* does not exist. If the value of the *CallBackID* is the empty string("") then all the Call backs registered with the *CallManagement* service will be cleared.

2.6.20.1 Arguments

Table 2-50:   Arguments for *ClearCallBack()*

Argument	Direction	relatedStateVariable
CallBackID	*IN*	*A_ARG_TYPE_CallBackID*

2.6.20.2 Argument Descriptions

The input argument *CallBackID* uniquely identifies the Call back which is to be cleared.

2.6.20.3 Service Requirements

None.

2.6.20.4 Control Point Requirements When Calling The Action

None.

2.6.20.5 Dependency on Device State

None.

2.6.20.6 Effect on Device State

None.

2.6.20.7 Errors

Table 2-51:   Error Codes for *ClearCallBack()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
711	Invalid CallBackID	The specified *CallBackID* is invalid.

2.6.21 *GetCallBackInfo()*

This action allows a TelCP to retrieve information about all the Call backs registered with the *CallManagement* service.

2.6.21.1 Arguments

Table 2-52:   Arguments for *GetCallBackInfo()*

Argument	Direction	relatedStateVariable
CallBackInfo	*OUT*	*A_ARG_TYPE_CallBackInfoList*

2.6.21.2 Argument Descriptions

The output argument *CallBackInfo* contains Call back information registered with the CallManagemnet service.

2.6.21.3 Service Requirements

None.

2.6.21.4 Control Point Requirements When Calling The Action

None.

2.6.21.5 Dependency on Device State

None.

2.6.21.6 Effect on Device State

None.

2.6.21.7 Errors

Table 2-53:   Error Codes for *GetCallBackInfo()*

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.

ErrorCode	errorDescription	Description
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.

2.6.22 Relationships Between Actions

There is dependency between Call Status and invokable actions. (See 2.7)

2.6.23 Error Code Summary

The following table lists error codes common to actions for this service type. If an action results in multiple errors, the most specific error should be returned.

Table 2-54:   Error Code Summary

ErrorCode	errorDescription	Description
400-499	TBD	See UPnP Device Architecture section on Control.
500-599	TBD	See UPnP Device Architecture section on Control.
606	Action not Authorized	The CP does not have privileges to invoke this action.
700		Reserved for future extensions.
701	Invalid TelCP	The specified TelCPName or Secret Key is invalid.
702	TelCPName is already used	The specified NewTelCPName is already used.
703	Invalid CallID	The specified CallID is invalid.
704	Invalid peerID	The specified peerID is invalid
705	Invalid priority	The specified priority is invalid.
706	Invalid CallMode	The specified CallMode is invalid.
707	Invalid Media Capability	The specified Media Capability is invalid.
708	Busy	No resource to create a Call is left.
709	Invalid CalleeID	The specified CalleeID is invalid.
710	Invalid NewMonopolizer	The specified NewMonopolizer is invalid.
711	Invalid CallBackID	The specified CallBackID is invalid.
712	Invalid Call Status	The action is called when it is not allowed for the Call Status.
713	Unauthorized Identity	The identity(a TelCP or a user) is not authorized to invoke the action.
714	Identity does not exist	The identity of the TS has not been assigned yet by the telephony service in the WAN side.

Note: 800-899 Error Codes are not permitted for standard actions. See UPnP Device Architecture section on Control for more details.

2.7 Service Behavioral Model

2.7.1 State Diagram

This section describes the state diagram of a Call which is managed by the *CallManagement* service. The Call Status MAY change when an action is invoked or when an event is received.

2.7.1.1 State Diagram for a Caller

The Figure 10 illustrates the state diagram of a Call with respect to a Caller.

1. When a Caller(TelCP) invokes the *StartCall()* action or the *InitialteCall()* action, a new instance of a Call is created and the status of the instance is set to as "*Dialing*". The TS then sends a request to the Callee to start a new Call.

2. When the TS receives a provisional response from the Callee (i.e., the Callee has received the request but has not accepted the Call yet), the status of the Call is changed from "*Dialing*" to "*Calling*".

3. When the TS receives the final response (i.e., the Callee has accepted the Call) from the Callee, the status is changed to "*Connected*".

4. When a Caller(TelCP) invokes the *StartMediaTransfer()* action, the status is changed to "*Talking*".

5. A Caller can invoke the *StopCall()* action at any time and the status of the Call is changed to "*Disconnected*" when this action is invoked.

6. When the TS receives a response to reject the Call or a request to terminate the Call, the status is changed to "*Disconnected*".
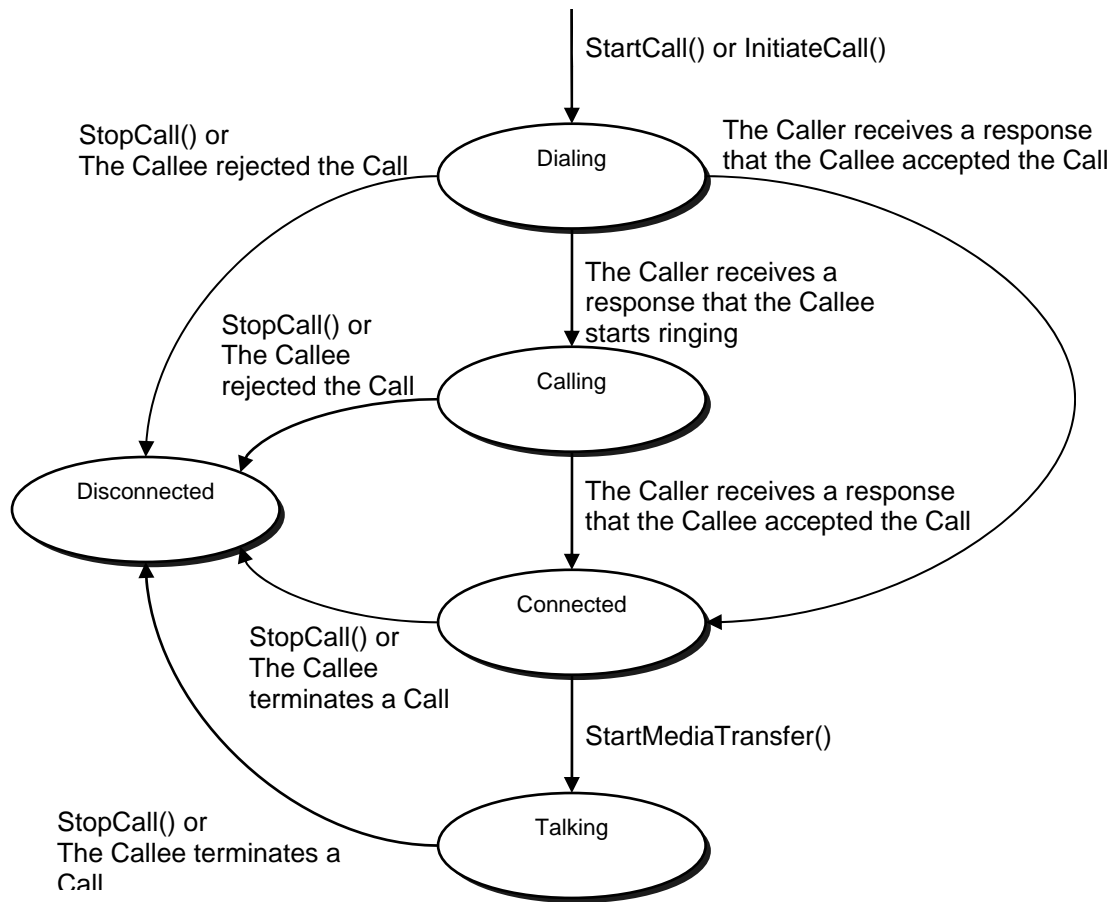
Figure 10: Call State Diagram for a Caller

2.7.1.2 State Diagram for a Callee

The Figure 11 illustrates the state diagram of a Call with respect to a Callee.

1. When the TS receives an incoming Call, a new instance of a Call is created and the status of the instance is set to as "*Ringing*".

2. When a Callee(TelCP) invokes the *AcceptCall()* action, the status of the Call is changed to "*Connected*".

3. When a Callee(TelCP) invokes the *StartMediaTransfer()* action, the status of the Call is changed to "*Talking*".

4. When a Callee(TelCP) invokes the *RejectCall()* action or the *StoptCall()* action, the status of the Call is changed to "*Disconnected*".

5. When the TS receives a response to cancel the Call or a request to terminate the Call, the status of the Call is changed to "*Disconnected*".

incoming Call

RejectCall() or
The Caller cancels the Call

Ringing

AcceptCall()

StopCall() or
The Caller terminates
the Call

Disconnected

Connected

StartMediaTransfer()

StopCall() or
The Caller terminates the Call
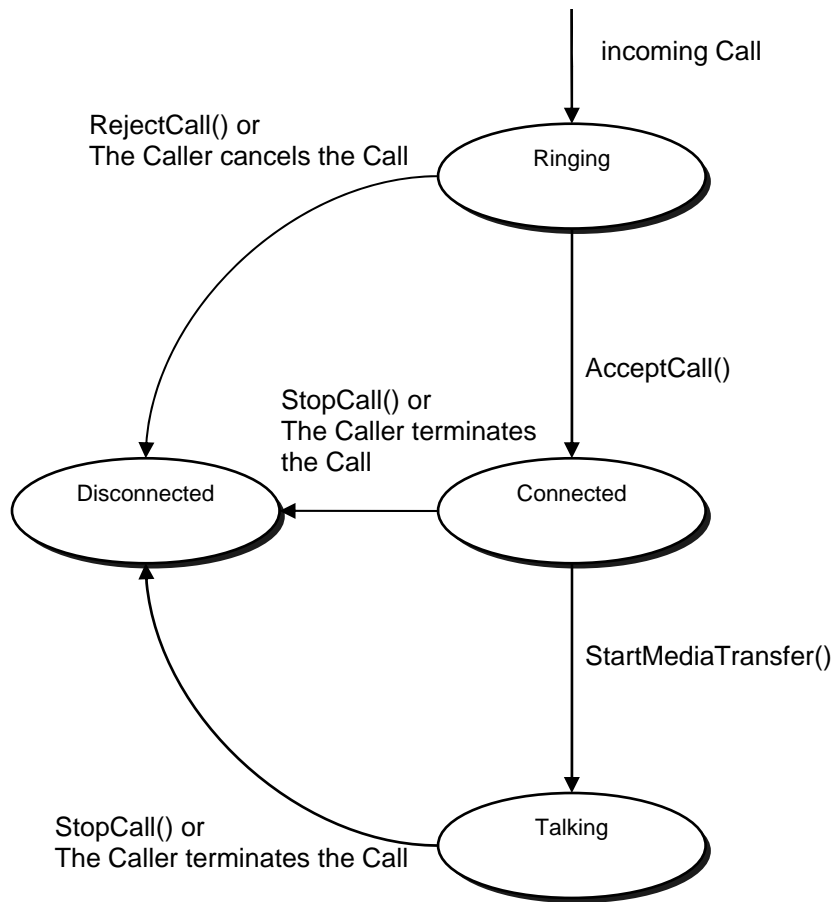
Talking

Figure 11: Call State Diagram for a Callee

2.7.1.3   State Diagram to request the modification of a Call

When the Call Status is "*Talking* ", a TelCP can modify the Media Capabilities of the Call. The Figure 12 illustrates the state diagram of a Call when a TelCP requests to modify the Media Capabilities of the Call.

1. When a TelCP invokes the *ModifyCall()* action, the status of the Call is changed to "*SendingModifyRequest*".

2. When the TS receives a response to accept the request to modify the Call, the status of the Call is changed to "*Modified*".

3. When the TS receives a response to reject the request to modify the Call, the status of the Call is changed to "*ModifyFailed*".

4. When the status is "*Modified*" and a TelCP invokes the *StartMediaTransfer()* action, the status of the Call is changed to "*Talking*".

5. When the status is "*ModifyFailed*", the status of the Call is automatically changed to "*Talking*"

6. .When a TelCP invokes the *StoptCall()* action, the status of the Call is changed to "*Disconnected*".

7. When the TS receives a request to terminate the Call, the status of the Call is changed to "*Disconnected*".
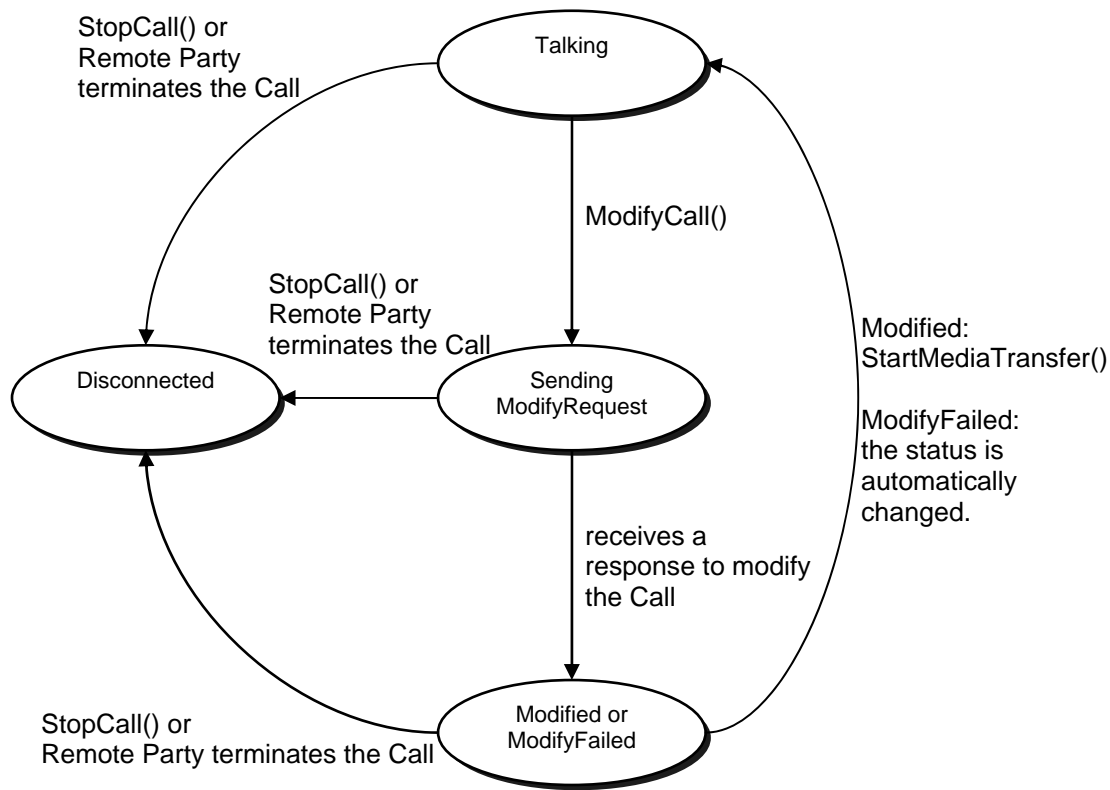
Figure 12: Call State Diagram to request the modification of a Call

2.7.1.4 **State Diagram `to` accept the modification of a Call**

When the Call Status is "*Talking*" and the TS receives a request to modify the Media Capabilities of the Call, a TelCP can accept or reject the request. The Figure 13 illustrates the state diagram of a Call when a TelCP accepts or rejects the request.

1. When the TS receives a request to modify the Call, the status of the Call is changed to "*ReceivingModifyRequest*".

2. When a TelCP invokes the *AcceptModifyCall()* action, the status of the Call is changed to "*Modified*".

3. When a TelCP invokes the *RejectCall()* action, the status of the Call is changed to "*ModifiedFailed*".

4. When the status is "*Modified*" and a TelCP invokes the *StartMediaTransfer()* action, the status of the Call is changed to "*Talking*".

5. When the status is "*ModifyFailed*", the status of the Call is automatically changed to "*Talking*"

6. When a TelCP invokes the *StoptCall()* action, the status of the Call is changed to "*Disconnected*".

7. When the TS receives a request to terminate the Call, the status of the Call is changed to "*Disconnected*".

StopCall() or
Remote Party
terminates the Call

Talking

receive a request
to modify the Call

StopCall() or
Remote Party
terminates the Call

Disconnected

Receiving
ModifyRequest

Modified:
StartMediaTransfer()

ModifyFailed:
the status is
automatically
changed.

AcceptModifyCall()
or
RejectCall()

StopCall() or
Remote Party terminates the Call

Modified or
ModifyFailed
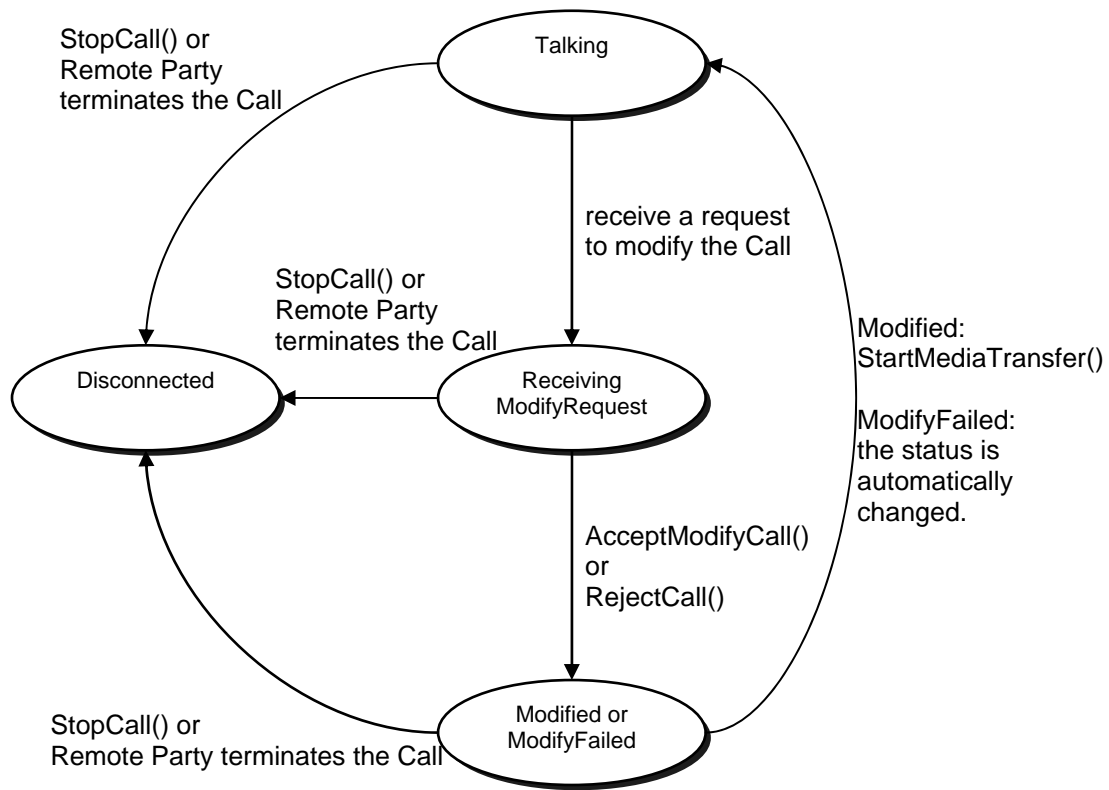
Figure 13: Call State Diagram to accept the modification of a Call

3   Theory of Operation (Informative)

3.1   TC-Based Media Handling

3.1.1   Create an outgoing Call

The following sequence describes how to create an outgoing Call in the Non-Monopolization Mode using TC-Based Media Handling.

1. The TelCP determines the Media Capabilities of the TS by invoking the *GetMediaCapabilities()* action.

2. The TelCP determines the Media Capabilities of the TC by invoking the *GetMediaCapabilities()* action.

3. The TelCP selects the set of appropriate Media Capabilities for the Call by matching the Media Capabilities of the TS and the TC.

4. The TelCP invokes the *StartCall()* action on the TS and the TS initiates the Call on the WAN side.

5. The TS sends the *CallInfo* state variable to the TelCP about the state of the Call("*Dialing*", "*Calling*" and "*Connected*"). The Call between the TS and the WAN side is established at this point.

6. The TelCP invokes the *StartMediaSession()* action on the TC after the TelCP receives the *CallInfo* state variable with the Call Status as "*Connected*". The TC starts sending and/or receiving the Media Streams.

7. The TC sends the *MediaSessionInfo* state variable to the TelCP with the status of the Media Session as "*Started*".

8. The TelCP invokes the *StartMediaTransfer()* action on the TS. The TS starts sending and/or receiving the Media Streams.

9. The TS sends the *CallInfo* state variable to the TelCP with the CallStatus as "*Talking*".

10. If the TelCP wants to disconnect the Call, the TelCP invokes the *StopCall()* action on the TS.

11. The TelCP then invokes the *StopMediaSession()* action on the TC.

12. The TS sends the *CallInfo* state variable to the TelCP with the CallStatus as "*Disconneted*" and the TC sends the *MediaSessionInfo* state variable to the TelCP with the status of the Media Session as "*Stopped*".

WAN Side	TS	TelCP	TC

GetMediaCapabilities()

MediaCapabilities

GetMediaCapabilities()

MediaCapabilities

StartCall()

CallID

Outgoing Call

Event: CallInfo(Dialing)

Ringing

Event: CallInfo(Calling)

Callee accepted a Call

Event: CallInfo(Connected)

StartMediaSession()

MediaSessionID, MediaCapabilities

StartMediaTransfer()

Media Streams   Media Streams

Event: CallInfo(Talking)

Event: MediaSessionInfo(Started)

StopCall()

Terminate a Call

StopMediaSession()

Event: CallInfo(Disconnected)

Event: MediaSessionInfo(Stopped)

Figure 14: Flow basics for creating an outgoing Call (TC-Based Media Handling)

3.1.2　Accept an incoming Call

The following sequence describes how to accept an incoming Call in the Non-Monopolization Mode using TC-Based Media Handling.

1. When the TS receives an incoming Call on the WAN side, the TS sends the *CallInfo* state variable to the TelCP with the Call Status as "*Ringing*". The *CallInfo* state variable also includes the Media Capabilities of the Caller.

2. The TelCP determines the Media Capabilities of the TC by invoking the *GetMediaCapabilities()* action.

3. The TelCP selects the set of appropriate Media Capabilities for the Call by matching the Media Capabilities of the TS and the TC.

4. The TelCP invokes the *AcceptCall()* action on the TS and the TS accepts the Call on the WAN side.

5. After the Call between the TS and the WAN side is established, the TS sends the *CallInfo* state variable to the TelCP with the Call Status as "*Connected*".

6. The TelCP invokes the *StartMediaSession()* action on the TC after the TelCP receives the *CallInfo* state variable with the Call Status as "*Connected*". The TC starts sending and/or receiving the Media Streams.

7. The TC sends the *MediaSessionInfo* state variable to the TelCP with the status of the Media Session as "*Started*".

8. The TelCP invokes the *StartMediaTransfer()* action on the TS. The TS starts sending and/or receiving the Media Streams.

9. The TS sends the *CallInfo* state variable to the TelCP with the Call Status as "*Talking*".

10. If the TelCP wants to disconnect the Call, the TelCP invokes the *StopCall()* action on the TS.

11. The TelCP then invokes the *StopMediaSession()* action on the TC.

12. The TS sends the *CallInfo* state variable to the TelCP with the Call Status as "*Disconneted*" and the TC sends the *MediaSessionInfo* state variable to the TelCP with the status of the Media Session as "*Stopped*".

Figure 15: Flow basics for accepting an incoming Call (TC-Based Media Handling)

3.1.3 Modify an ongoing Call

The following sequence describes how to modify an ongoing Call from an audio to a video Call in the Non-Monopolization Mode using TC-Based Media Handling. In this sequence, the TC1 supports the audio capabilities and the TC2 supports the video capabilities. At first, the TelCP creates an audio Call with TC1. Then the TelCP modifies the Call from audio to a video Call by adding TC2.

1. The TelCP creates an audio Call with the TC1. The sequence is the same as the sequence shown in section 3.1.1.

2. The TelCP determines the Media Capabilities of the TS by invoking the *GetMediaCapabilities()* action.

3. The TelCP determines the Media Capabilities of the TC2 by invoking the *GetMediaCapabilities()* action.

4. The TelCP selects the set of appropriate Media Capabilities for the Call to change the Media Capabilities from an audio to a video Call by matching the Media Capabilities of the TS and the TC1 and TC2.

5. The TelCP invokes the *ModifyCall()* action on the TS and the TS modifies the Call on the WAN side.

6. The TS sends the *CallInfo* state variable to the TelCP about the state of the Call("*SendingModifyRequest*" and "*Modified*"). The Call between the TS and the WAN side is modified at this point.

7. The TelCP invokes the *StartMediaSession()* action on the TC2 after the TelCP receives the *CallInfo* state variable with the Call Status as "*Modified*". The TC2 starts sending and/or receiving the Media Streams.

8. The TC2 sends the *MediaSessionInfo* state variable to the TelCP with the status of the Media Session as "*Started*".

9. The TelCP invokes the *StartMediaTransfer()* action on the TS. The TS starts sending and/or receiving the Media Streams according to the modified Media Capabilities.

10. The TS sends the *CallInfo* state variable to the TelCP with the Call Status as "*Talking*".

11. If the TelCP wants to disconnect the Call, the TelCP invokes the *StopCall()* action on the TS.

12. The TelCP then invokes the *StopMediaSession()* action on the TC1 and TC2.

13. The TS sends the *CallInfo* state variable to the TelCP with the CallStatus as "*Disconneted*" and the TC1 and TC2 send the *MediaSessionInfo* state variable to the TelCP with the status of the Media Session as "*Stopped*".
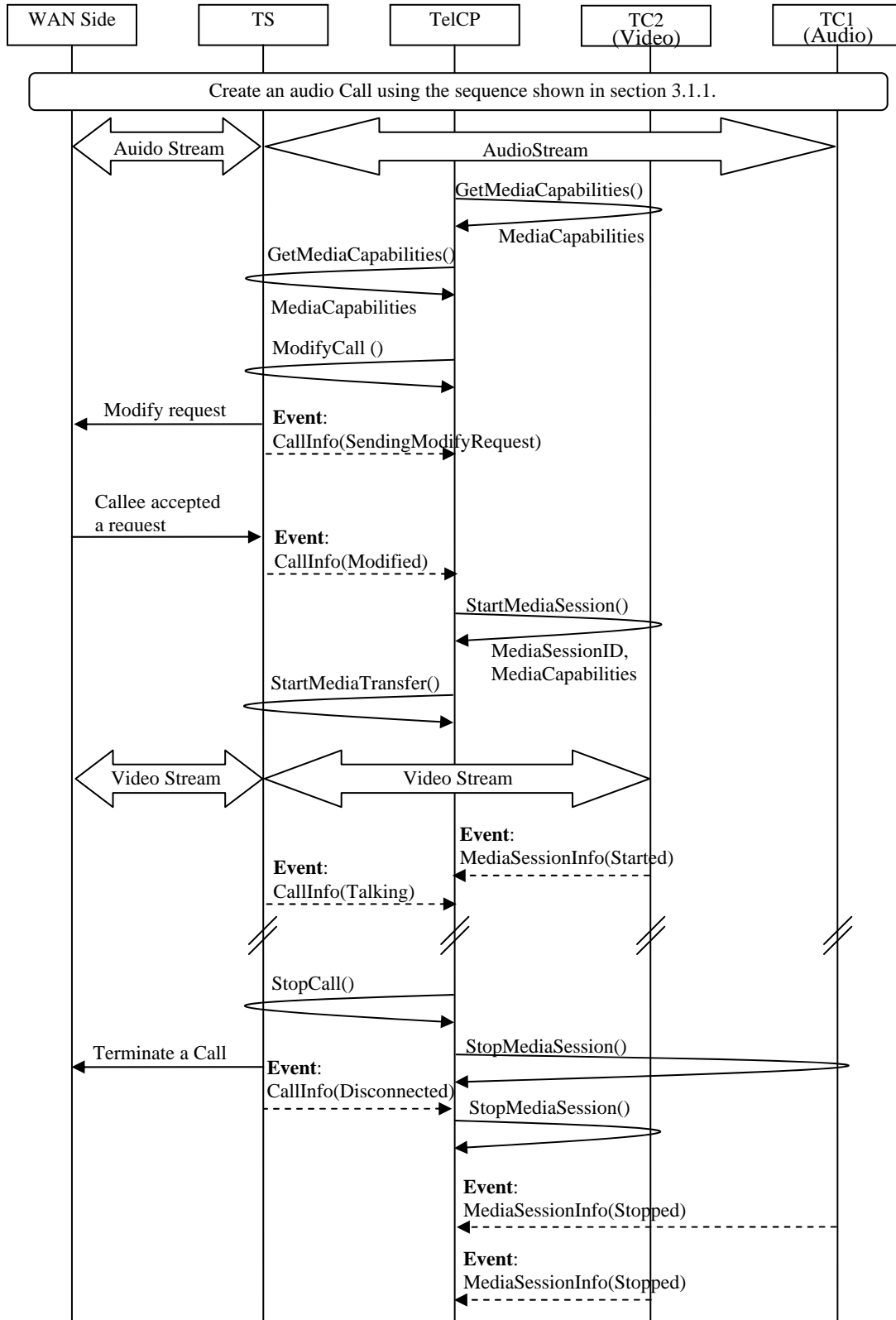
Figure 16: Flow basics for modifying an ongoing Call (TC-Based Media Handling)

3.2 TS-Based Media Handling

3.2.1 Create an outgoing Call

The following sequence describes how to create an outgoing Call in the Non-Monopolization Mode using TS-Based Media Handling.

1. The TelCP determines the Media Capabilities of the TS by invoking the *GetMediaCapabilities()* action.

2. The TelCP selects the set of appropriate Media Capabilities for the Call from the Media Capabilities of the TS using the Native Media Capabilities of the TS.

3. The TelCP invokes the *StartCall()* action on the TS and the TS initiates the Call on the WAN side.

4. The TS continuously sends the *CallInfo* state variable to the TelCP about the state of the Call("*Dialing*", "*Calling*" and "*Connected*"). The Call between the TS and the WAN side is established at this point.

5. The TelCP invokes the *StartMediaSession()* action on the TC after the TelCP receives the *CallInfo* state variable with the Call Status as "*Connected*". The TC starts sending and/or receiving the Media Streams.

6. The TelCP invokes the *StartMediaTransfer()* action on the TS. The TS starts sending and/or receiving the Media Streams.

7. The TS sends the *CallInfo* state variable to the TelCP with the CallStatus as "*Talking*".

8. If the TelCP wants to disconnect the Call, the TelCP invokes the *StopCall()* action on the TS.

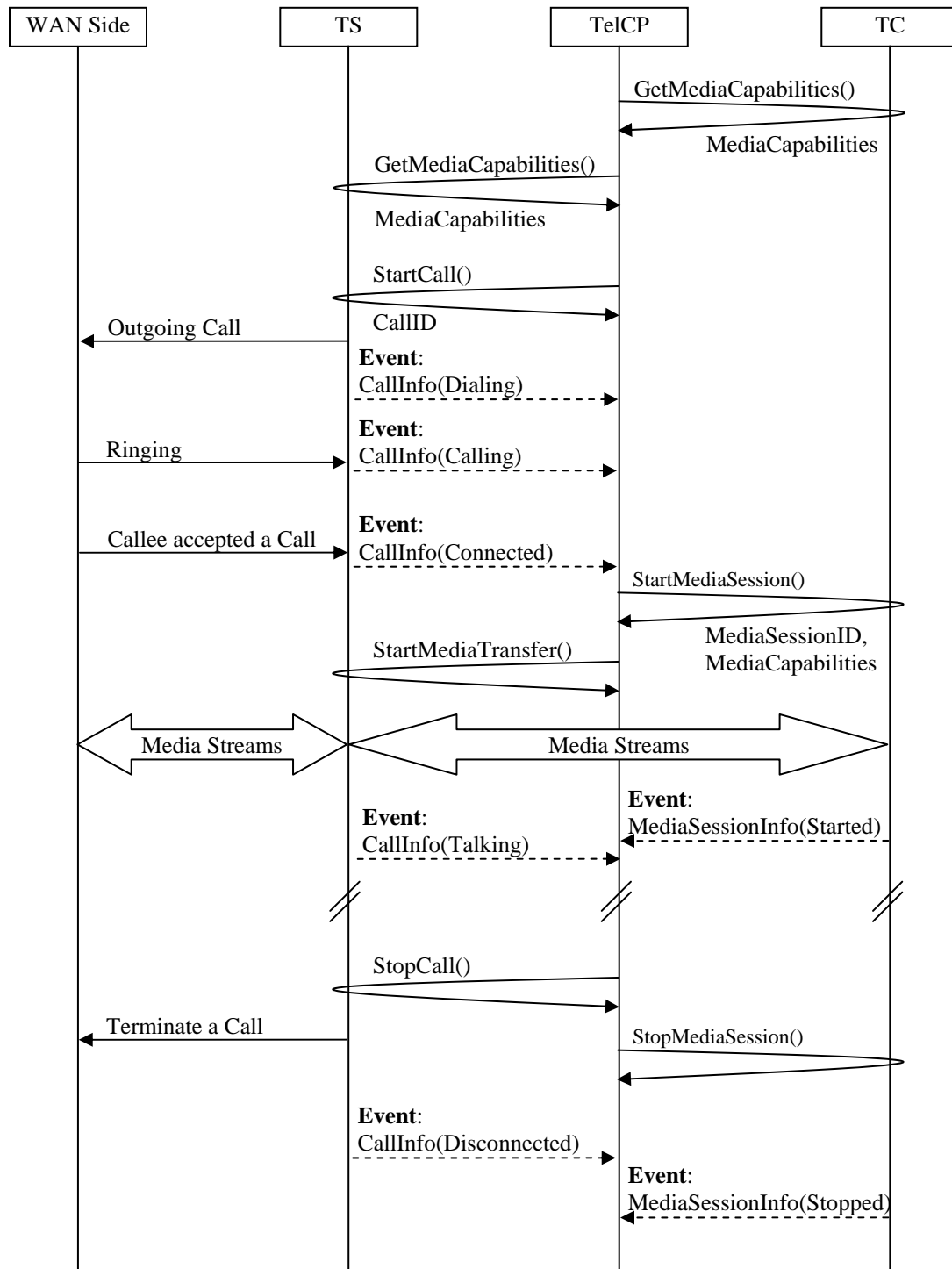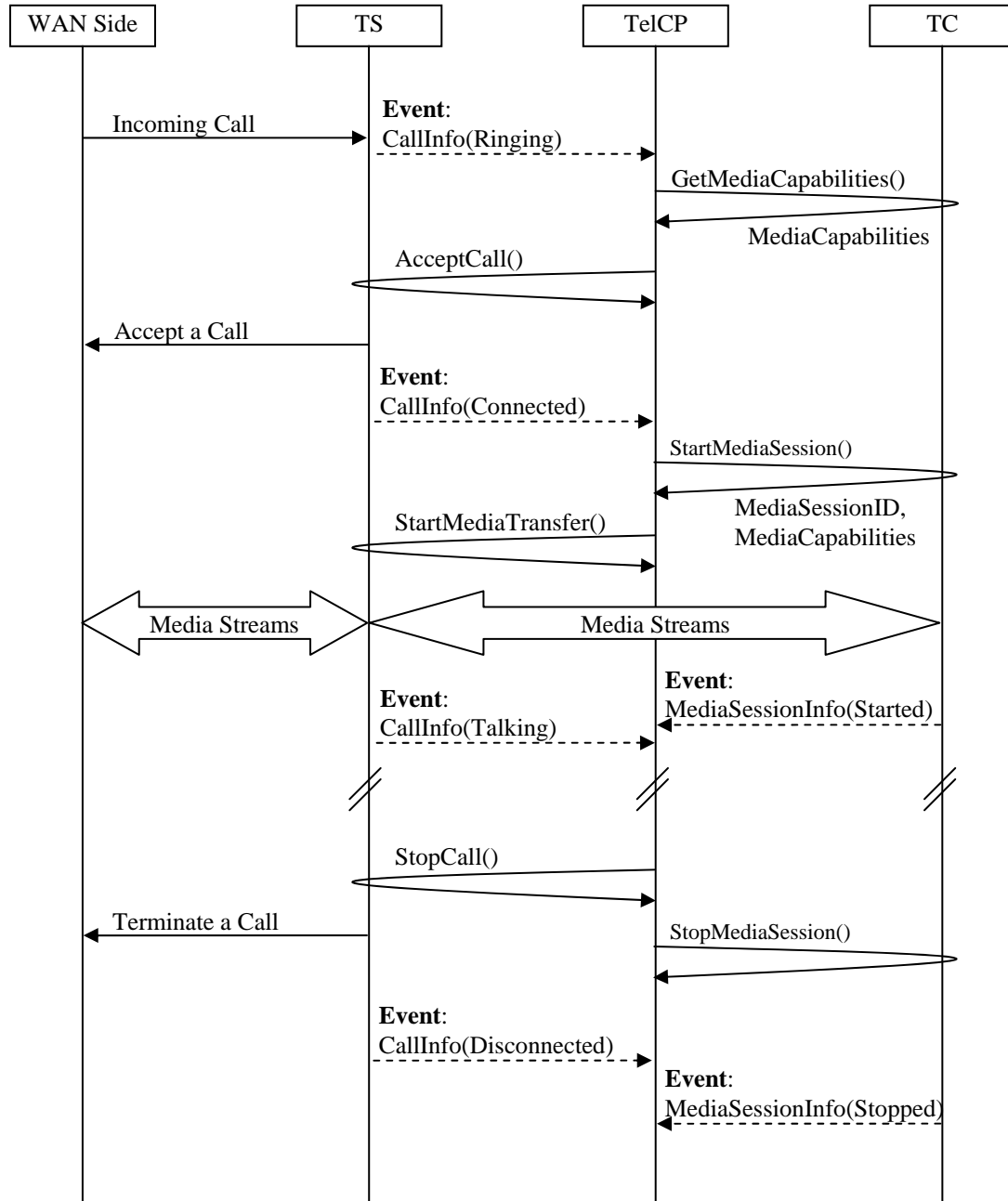9. The TS sends the *CallInfo* state variable to the TelCP with the CallStatus as "*Disconneted*".
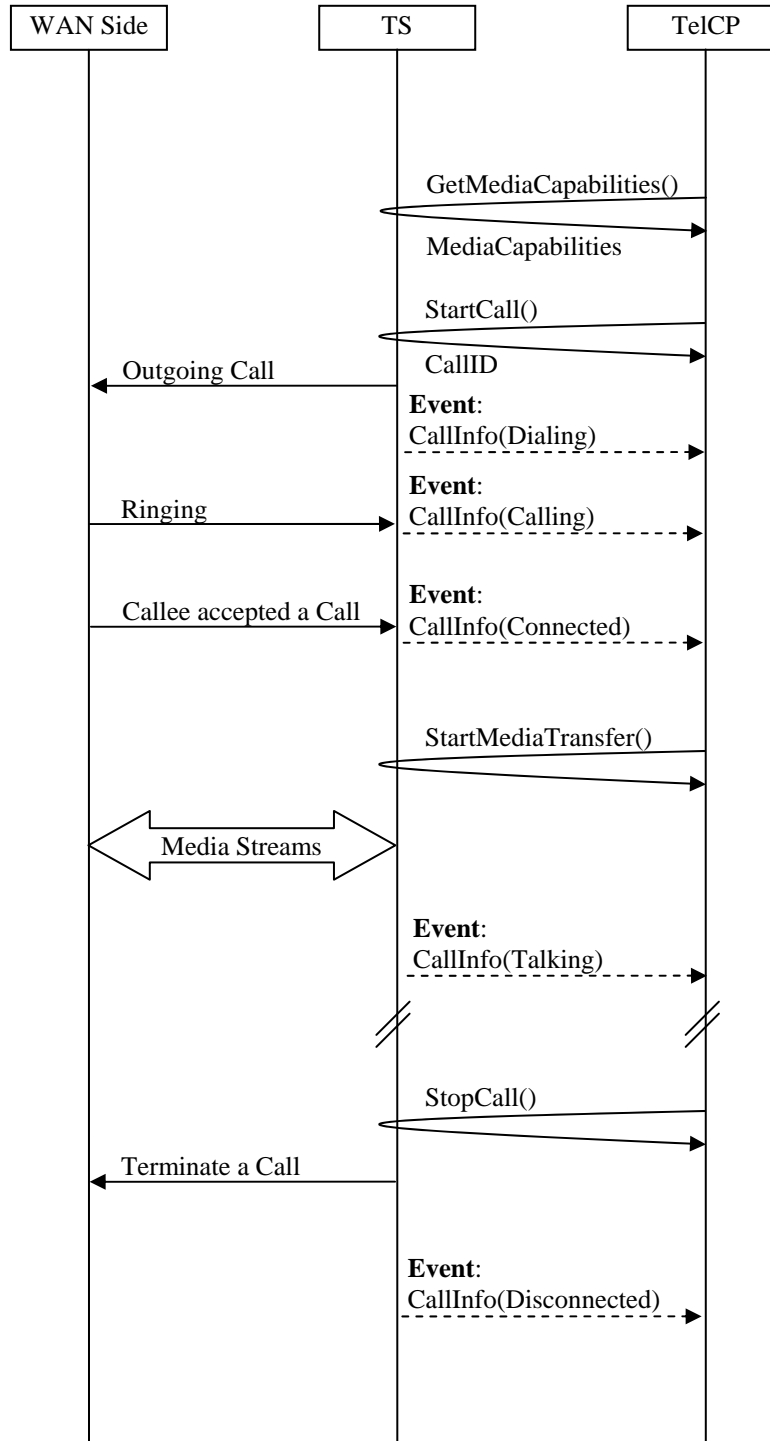
Figure 17: Flow basics for creating an outgoing Call (TS-Based Media Handling)

3.2.2 Accept an incoming Call

The following sequence describes how to accept an incoming Call in the Non-Monopolization Mode using TS-Based Media Handling.

1. When the TS receives an incoming Call on the WAN side, the TS sends the *CallInfo* state variable to the TelCP with the Call Status as "*Ringing*". The *CallInfo* state variable also includes the Media Capabilities of the Caller.

2. The TelCP selects the set of appropriate Media Capabilities for the Call from the Native Media Capabilities included in the received *CallInfo* state variable.

3. The TelCP invokes the *AcceptCall()* action on the TS and the TS accepts the Call on the WAN side.

4. After the Call between the TS and the WAN side is established, the TS sends the *CallInfo* state variable to the TelCP with the Call Status as "*Connected*".

5. The TelCP invokes the *StartMediaTransfer()* action on the TS. The TS starts sending and/or receiving the Media Streams.

6. The TS sends the *CallInfo* state variable to the TelCP with the Call Status as "*Talking*".

7. If the TelCP wants to disconnect the Call, the TelCP invokes the *StopCall()* action on the TS.

8. The TS sends the *CallInfo* state variable to the TelCP with the Call Status as "*Disconneted*".

Figure 18: Flow basics for accepting an incoming Call (TS-Based Media Handling)

3.2.3 Modify an ongoing Call

The following sequence describes how to modify an ongoing Call from an audio to a video Call in the Non-Monopolization Mode using both TC-Based Media Handling and TS-Based Media Handling. In this sequence, the TelCP uses TS-Based Media Handling for audio capabilities and TC-Based Media Handling for video capabilities. The TC1 supports the video capabilities and is used for TC-Based Media Handling. At first, the TelCP creates an audio Call using TS-Based Media Handling. Then the TelCP modifies the Call from audio to a video Call by adding TC1.

1. The TelCP creates an audio Call using TS-Based Media Handling. The sequence is the same as the sequence shown in section 3.2.1.

2. The TelCP determines the Media Capabilities of the TS by invoking the *GetMediaCapabilities()* action.

3. The TelCP determines the Media Capabilities of the TC1 by invoking the *GetMediaCapabilities()* action.

4. The TelCP selects the set of appropriate Media Capabilities for the Call to change the Media Capabilities from an audio to a video Call by matching the Media Capabilities of the TS and the TC1.

5. The TelCP invokes the *ModifyCall()* action on the TS and the TS modifies the Call on the WAN side.

6. The TS sends the *CallInfo* state variable to the TelCP about the state of the Call("*SendingModifyRequest*" and "*Modified*"). The Call between the TS and the WAN side is modified at this point.

7. The TelCP invokes the *StartMediaSession()* action on the TC1 after the TelCP receives the *CallInfo* state variable with the Call Status as "*Modified*". The TC1 starts sending and/or receiving the Media Streams.

8. The TC1 sends the *MediaSessionInfo* state variable to the TelCP with the status of the Media Session as "*Started*".

9. The TelCP invokes the *StartMediaTransfer()* action on the TS. The TS starts sending and/or receiving the Media Streams according to the modified Media Capabilities.

10. The TS sends the *CallInfo* state variable to the TelCP with the Call Status as "*Talking*".

11. If the TelCP wants to disconnect the Call, the TelCP invokes the *StopCall()* action on the TS.

12. The TelCP then invokes the *StopMediaSession()* action on the TC1.

13. The TS sends the *CallInfo* state variable to the TelCP with the CallStatus as "*Disconneted*" and the TC1 sends the *MediaSessionInfo* state variable to the TelCP with the status of the Media Session as "*Stopped*".
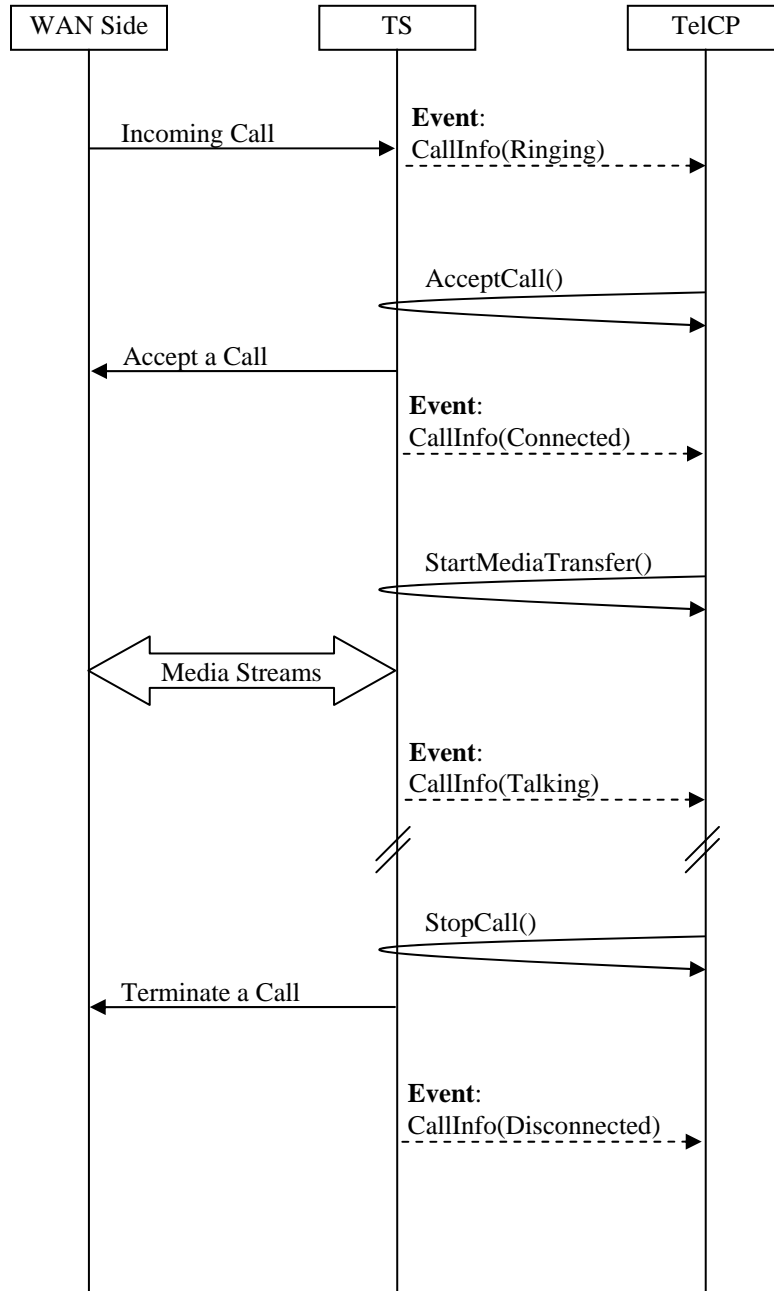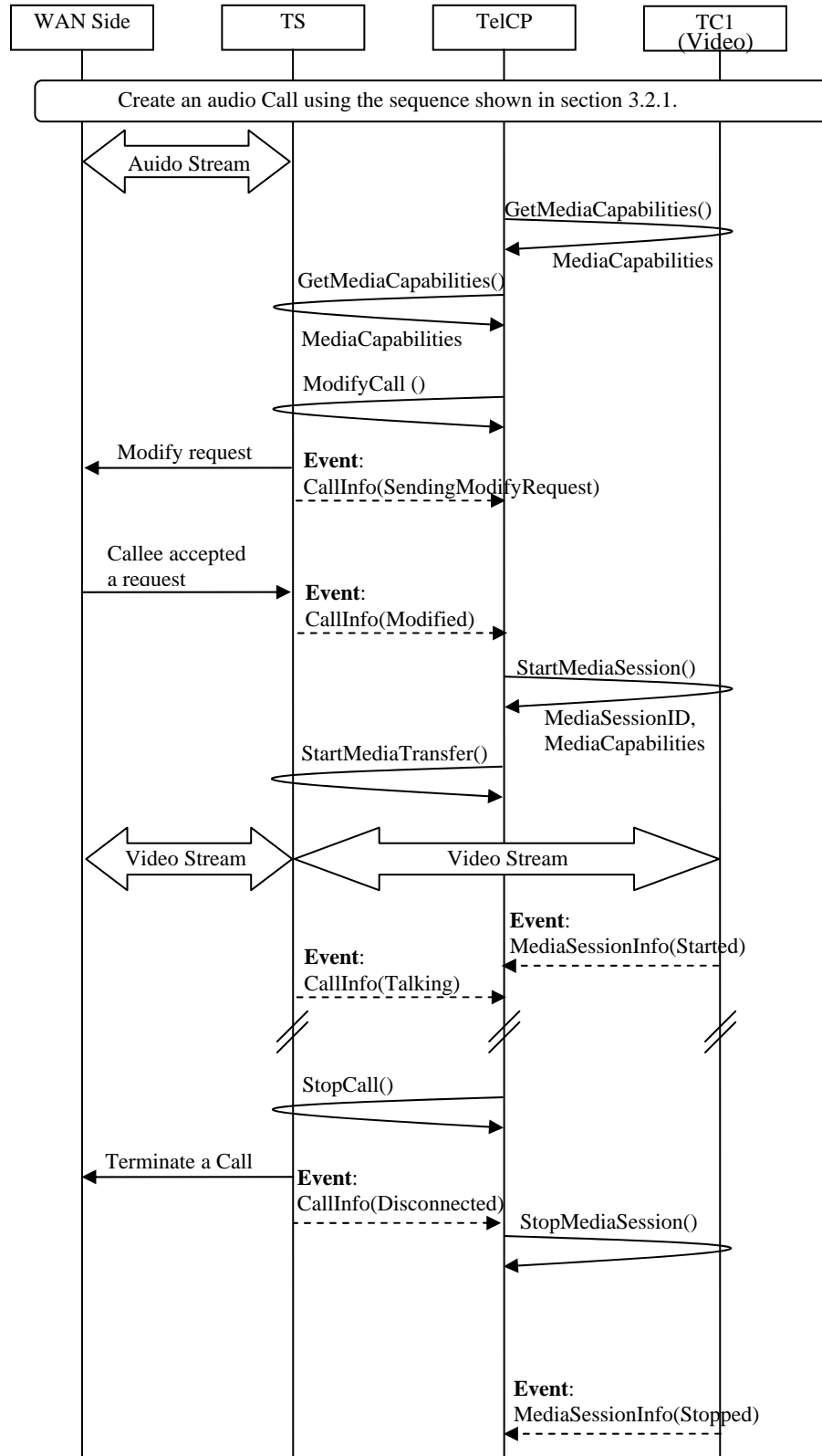
Figure 19: Flow basics for modifying an ongoing Call (TS-Based Media Handling)

4   XML Service Description

```xml
<?xml version="1.0"?>
<scpd xmlns="urn:schemas-upnp-org:service-1-0">

    <specVersion>
        <major>1</major>
        <minor>0</minor>
    </specVersion>

    <actionList>

        <action>
            <name>AcceptCall</name>
            <argumentList>
                <argument>
                    <name>TelCPName</name>
                    <direction>in</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_TelCPName
                    </relatedStateVariable>
                </argument>
                <argument>
                    <name>SecretKey</name>
                    <direction>in</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_SecretKey
                    </relatedStateVariable>
                </argument>
                <argument>
                    <name>TargetCallID</name>
                    <direction>in</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_CallID
                    </relatedStateVariable>
                </argument>
                <argument>
                    <name>MediaCapabilityInfo</name>
                    <direction>in</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_MediaCapabilityInfo
                    </relatedStateVariable>
                </argument>
                <argument>
                    <name>CallMode</name>
                    <direction>in</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_CallMode
                    </relatedStateVariable>
                </argument>
            </argumentList>
        </action>

        <action>
            <name>AcceptModifyCall</name>
            <argumentList>
```

```xml
                    <argument>
                        <name>TelCPName</name>
                        <direction>in</direction>
                        <relatedStateVariable>
                            A_ARG_TYPE_TelCPName
                        </relatedStateVariable>
                    </argument>
                    <argument>
                        <name>SecretKey</name>
                        <direction>in</direction>
                        <relatedStateVariable>
                            A_ARG_TYPE_SecretKey
                        </relatedStateVariable>
                    </argument>
                    <argument>
                        <name>TargetCallID</name>
                        <direction>in</direction>
                        <relatedStateVariable>
                            A_ARG_TYPE_CallID
                        </relatedStateVariable>
                    </argument>
                    <argument>
                        <name>MediaCapabilityInfo</name>
                        <direction>in</direction>
                        <relatedStateVariable>
                            A_ARG_TYPE_MediaCapabilityInfo
                        </relatedStateVariable>
                    </argument>
                </argumentList>
            </action>

            <action>
                <name>ChangeMonopolizer</name>
                <argumentList>
                    <argument>
                        <name>CurrentMonopolizer</name>
                        <direction>in</direction>
                        <relatedStateVariable>
                            A_ARG_TYPE_TelCPName
                        </relatedStateVariable>
                    </argument>
                    <argument>
                        <name>SecretKey</name>
                        <direction>in</direction>
                        <relatedStateVariable>
                            A_ARG_TYPE_SecretKey
                        </relatedStateVariable>
                    </argument>
                    <argument>
                        <name>TargetCallID</name>
                        <direction>in</direction>
                        <relatedStateVariable>
                            A_ARG_TYPE_CallID
                        </relatedStateVariable>
                    </argument>
                    <argument>
```

```xml
                <name>NewMonopolizer</name>
                <direction>in</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_TelCPName
                </relatedStateVariable>
            </argument>
        </argumentList>
    </action>

    <action>
        <name>ChangeTelCPName</name>
        <argumentList>
            <argument>
                <name>CurrentTelCPName</name>
                <direction>in</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_TelCPName
                </relatedStateVariable>
            </argument>
            <argument>
                <name>CurrentSecretKey</name>
                <direction>in</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_SecretKey
                </relatedStateVariable>
            </argument>
            <argument>
                <name>NewTelCPName</name>
                <direction>in</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_TelCPName
                </relatedStateVariable>
            </argument>
            <argument>
                <name>NewSecretKey</name>
                <direction>out</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_SecretKey
                </relatedStateVariable>
            </argument>
            <argument>
                <name>Expires</name>
                <direction>out</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_Expires
                </relatedStateVariable>
            </argument>
        </argumentList>
    </action>

    <action>
        <name>ClearCallBack</name>
        <argumentList>
            <argument>
                <name>CallBackID</name>
                <direction>in</direction>
```

```xml
            <relatedStateVariable>
                A_ARG_TYPE_CallBackID
            </relatedStateVariable>
        </argument>
    </argumentList>
</action>

<action>
    <name>ClearCallLogs</name>
</action>

<action>
    <name>GetCallBackInfo</name>
    <argumentList>
        <argument>
            <name>CallBackInfo</name>
            <direction>out</direction>
            <relatedStateVariable>
                A_ARG_TYPE_CallBackInfoList
            </relatedStateVariable>
        </argument>
    </argumentList>
</action>

<action>
    <name>GetCallInfo</name>
    <argumentList>
        <argument>
            <name>TelCPName</name>
            <direction>in</direction>
            <relatedStateVariable>
                A_ARG_TYPE_TelCPName
            </relatedStateVariable>
        </argument>
        <argument>
            <name>SecretKey</name>
            <direction>in</direction>
            <relatedStateVariable>
                A_ARG_TYPE_SecretKey
            </relatedStateVariable>
        </argument>
        <argument>
            <name>TargetCallID</name>
            <direction>in</direction>
            <relatedStateVariable>
                A_ARG_TYPE_CallID
            </relatedStateVariable>
        </argument>
        <argument>
            <name>CallInfoList</name>
            <direction>out</direction>
            <relatedStateVariable>
                A_ARG_TYPE_CallInfoList
            </relatedStateVariable>
        </argument>
    </argumentList>
</action>
```

```xml
<action>
   <name>GetCallLogs</name>
   <argumentList>
      <argument>
         <name>CallLogs</name>
         <direction>out</direction>
         <relatedStateVariable>
            A_ARG_TYPE_CallLogs
         </relatedStateVariable>
      </argument>
   </argumentList>
</action>

<action>
   <name>GetMediaCapabilities</name>
   <argumentList>
      <argument>
         <name>TCMediaCapabilityInfo</name>
         <direction>in</direction>
         <relatedStateVariable>
            A_ARG_TYPE_MediaCapabilityInfo
         </relatedStateVariable>
      </argument>
      <argument>
         <name>SupportedMediaCapabilityInfo</name>
         <direction>out</direction>
         <relatedStateVariable>
            A_ARG_TYPE_MediaCapabilityInfo
         </relatedStateVariable>
      </argument>
   </argumentList>
</action>

<action>
   <name>GetTelephonyIdentity</name>
   <argumentList>
      <argument>
         <name>TelephonyIdentity</name>
         <direction>out</direction>
         <relatedStateVariable>
            A_ARG_TYPE_TelephonyServierIdentity
         </relatedStateVariable>
      </argument>
   </argumentList>
</action>

<action>
   <name>GetTelCPNameList</name>
   <argumentList>
      <argument>
         <name>TelCPNameList</name>
         <direction>out</direction>
         <relatedStateVariable>
            A_ARG_TYPE_TelCPNameList
         </relatedStateVariable>
      </argument>
```

```xml
            </argumentList>
        </action>

        <action>
            <name>InitiateCall</name>
            <argumentList>
                <argument>
                    <name>CalleeID</name>
                    <direction>in</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_CalleeID
                    </relatedStateVariable>
                </argument>
                <argument>
                    <name>CallID</name>
                    <direction>out</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_CallID
                    </relatedStateVariable>
                </argument>
            </argumentList>
        </action>

        <action>
            <name>ModifyCall</name>
            <argumentList>
                <argument>
                    <name>TelCPName</name>
                    <direction>in</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_TelCPName
                    </relatedStateVariable>
                </argument>
                <argument>
                    <name>SecretKey</name>
                    <direction>in</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_SecretKey
                    </relatedStateVariable>
                </argument>
                <argument>
                    <name>TargetCallID</name>
                    <direction>in</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_CallID
                    </relatedStateVariable>
                </argument>
                <argument>
                    <name>MediaCapabilityInfo</name>
                    <direction>in</direction>
                    <relatedStateVariable>
                        A_ARG_TYPE_MediaCapabilityInfo
                    </relatedStateVariable>
                </argument>
            </argumentList>
        </action>
```

```xml
<action>
   <name>RegisterCallBack</name>
   <argumentList>
      <argument>
         <name>CalleeID</name>
         <direction>in</direction>
         <relatedStateVariable>
            A_ARG_TYPE_CalleeID
         </relatedStateVariable>
      </argument>
      <argument>
         <name>CallBackID</name>
         <direction>out</direction>
         <relatedStateVariable>
            A_ARG_TYPE_CallBackID
         </relatedStateVariable>
      </argument>
   </argumentList>
</action>

<action>
   <name>RegisterTelCPName</name>
   <argumentList>
      <argument>
         <name>TelCPName</name>
         <direction>in</direction>
         <relatedStateVariable>
            A_ARG_TYPE_TelCPName
         </relatedStateVariable>
      </argument>
      <argument>
         <name>CurrentSecretKey</name>
         <direction>in</direction>
         <relatedStateVariable>
            A_ARG_TYPE_SecretKey
         </relatedStateVariable>
      </argument>
      <argument>
         <name>NewSecretKey</name>
         <direction>out</direction>
         <relatedStateVariable>
            A_ARG_TYPE_SecretKey
         </relatedStateVariable>
      </argument>
      <argument>
         <name>Expires</name>
         <direction>out</direction>
         <relatedStateVariable>
            A_ARG_TYPE_Expires
         </relatedStateVariable>
      </argument>
   </argumentList>
</action>

<action>
   <name>RejectCall</name>
```

```xml
<argumentList>
   <argument>
      <name>TelCPName</name>
      <direction>in</direction>
      <relatedStateVariable>
         A_ARG_TYPE_TelCPName
      </relatedStateVariable>
   </argument>
   <argument>
      <name>SecretKey</name>
      <direction>in</direction>
      <relatedStateVariable>
         A_ARG_TYPE_SecretKey
      </relatedStateVariable>
   </argument>
   <argument>
      <name>TargetCallID</name>
      <direction>in</direction>
      <relatedStateVariable>
         A_ARG_TYPE_CallID
      </relatedStateVariable>
   </argument>
   <argument>
      <name>RejectReason</name>
      <direction>in</direction>
      <relatedStateVariable>
         A_ARG_TYPE_RejectReason
      </relatedStateVariable>
   </argument>
</argumentList>
</action>

<action>
   <name>StartCall</name>
   <argumentList>
      <argument>
         <name>TelCPName</name>
         <direction>in</direction>
         <relatedStateVariable>
            A_ARG_TYPE_TelCPName
         </relatedStateVariable>
      </argument>
      <argument>
         <name>SecretKey</name>
         <direction>in</direction>
         <relatedStateVariable>
            A_ARG_TYPE_SecretKey
         </relatedStateVariable>
      </argument>
      <argument>
         <name>CalleeID</name>
         <direction>in</direction>
         <relatedStateVariable>
            A_ARG_TYPE_CalleeID
         </relatedStateVariable>
      </argument>
```

```xml
            <argument>
                <name>CallPriority</name>
                <direction>in</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_CallPriority
                </relatedStateVariable>
            </argument>
            <argument>
                <name>MediaCapabilityInfo</name>
                <direction>in</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_MediaCapabilityInfo
                </relatedStateVariable>
            </argument>
            <argument>
                <name>CallMode</name>
                <direction>in</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_CallMode
                </relatedStateVariable>
            </argument>
            <argument>
                <name>CallID</name>
                <direction>out</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_CallID
                </relatedStateVariable>
            </argument>
        </argumentList>
    </action>

    <action>
        <name>StartMediaTransfer</name>
        <argumentList>
            <argument>
                <name>TelCPName</name>
                <direction>in</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_TelCPName
                </relatedStateVariable>
            </argument>
            <argument>
                <name>SecretKey</name>
                <direction>in</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_SecretKey
                </relatedStateVariable>
            </argument>
            <argument>
                <name>TargetCallID</name>
                <direction>in</direction>
                <relatedStateVariable>
                    A_ARG_TYPE_CallID
                </relatedStateVariable>
            </argument>
            <argument>
```

```xml
               <name>TCList</name>
               <direction>in</direction>
               <relatedStateVariable>
                   A_ARG_TYPE_TCList
               </relatedStateVariable>
           </argument>
           <argument>
               <name>MediaCapabilityInfo</name>
               <direction>in</direction>
               <relatedStateVariable>
                   A_ARG_TYPE_MediaCapabilityInfo
               </relatedStateVariable>
           </argument>
       </argumentList>
   </action>

   <action>
       <name>StopCall</name>
       <argumentList>
           <argument>
               <name>TelCPName</name>
               <direction>in</direction>
               <relatedStateVariable>
                   A_ARG_TYPE_TelCPName
               </relatedStateVariable>
           </argument>
           <argument>
               <name>SecretKey</name>
               <direction>in</direction>
               <relatedStateVariable>
                   A_ARG_TYPE_SecretKey
               </relatedStateVariable>
           </argument>
           <argument>
               <name>CallID</name>
               <direction>in</direction>
               <relatedStateVariable>
                   A_ARG_TYPE_CallID
               </relatedStateVariable>
           </argument>
       </argumentList>
   </action>

   <action>
       <name>UnregisterTelCPName</name>
       <argumentList>
           <argument>
               <name>TelCPName</name>
               <direction>in</direction>
               <relatedStateVariable>
                   A_ARG_TYPE_TelCPName
               </relatedStateVariable>
           </argument>
           <argument>
               <name>SecretKey</name>
               <direction>in</direction>
```

```xml
                <relatedStateVariable>
                    A_ARG_TYPE_SecretKey
                </relatedStateVariable>
            </argument>

        </argumentList>
    </action>

</actionList>

<serviceStateTable>

    <stateVariable sendEvents="no">
        <name>A_ARG_TYPE_TelephonyServerIdentity</name>
        <dataType>string</dataType>
    </stateVariable>

    <stateVariable sendEvents="no">
        <name>A_ARG_TYPE_CallBackID</name>
        <dataType>string</dataType>
        <allowedValueList>
            <allowedValue>Busy</allowedValue>
            <allowedValue>Not Acceptable Capability</allowedValue>
            <allowedValue>Rejected</allowedValue>
            <allowedValue>Cancelled</allowedValue>
        </allowedValueList>
    </stateVariable>

    <stateVariable sendEvents="no">
        <name>A_ARG_TYPE_CalleeID</name>
        <dataType>string</dataType>
    </stateVariable>

    <stateVariable sendEvents="yes">
        <name>TelCPNameList</name>
        <dataType>string</dataType>
    </stateVariable>

    <stateVariable sendEvents="no">
        <name>A_ARG_TYPE_CallLogs</name>
        <dataType>string</dataType>
    </stateVariable>

    <stateVariable sendEvents="no">
        <name>A_ARG_TYPE_CallBackInfoList</name>
        <dataType>string</dataType>
    </stateVariable>

    <stateVariable sendEvents="no">
        <name>A_ARG_TYPE_SecretKey</name>
        <dataType>string</dataType>
    </stateVariable>

    <stateVariable sendEvents="no">
        <name>A_ARG_TYPE_MediaCapabilityInfo</name>
        <dataType>string</dataType>
    </stateVariable>
```

```xml
        <stateVariable sendEvents="no">
           <name>A_ARG_TYPE_TCList</name>
           <dataType>string</dataType>
        </stateVariable>

        <stateVariable sendEvents="no">
           <name>A_ARG_TYPE_CallInfoList</name>
           <dataType>string</dataType>
        </stateVariable>

        <stateVariable sendEvents="no">
           <name>A_ARG_TYPE_TelCPNameList</name>
           <dataType>string</dataType>
        </stateVariable>

        <stateVariable sendEvents="yes">
           <name>CallInfo</name>
           <dataType>string</dataType>
        </stateVariable>

        <stateVariable sendEvents="no">
           <name>A_ARG_TYPE_Expires</name>
           <dataType>i4</dataType>
        </stateVariable>

        <stateVariable sendEvents="no">
           <name>A_ARG_TYPE_CallParam</name>
           <dataType>string</dataType>
        </stateVariable>

        <stateVariable sendEvents="no">
           <name>A_ARG_TYPE_TelCPName</name>
           <dataType>string</dataType>
        </stateVariable>

        <stateVariable sendEvents="no">
           <name>A_ARG_TYPE_CallID</name>
           <dataType>string</dataType>
        </stateVariable>

        <stateVariable sendEvents="yes">
           <name>CallBackAvailbility</name>
           <dataType>string</dataType>
        </stateVariable>

        <stateVariable sendEvents="no">
           <name>A_ARG_TYPE_CallMode</name>
           <dataType>string</dataType>
        </stateVariable>


        <stateVariable sendEvents="no">
           <name>A_ARG_TYPE_RejectReason</name>
           <dataType>string</dataType>
        </stateVariable>
```

```xml
            <stateVariable sendEvents="no">
               <name>A_ARG_TYPE_CallPriority</name>
               <dataType>string</dataType>
            </stateVariable>


      </serviceStateTable>
</scpd>
```

Appendix A.   XML complex type *peerType* (Normative)

A communication means the exchange of an information between two or more end entities. These end entities are herein referred as Peers. The Peer can be a Caller of a phone Call, recipient of an email message, or group of participants in a communication session, or a contact in an Address book.

In order to have a uniform representation of a *Peer* across all the services in the UPnP Telephony, the XML complex type `peerType` is defined. The same XML complex type can be reused by other UPnP Telephony services.

The complex type peerType contains the information to properly identify a contact and its communication address for e.g. a phone Call needs a telephone number, an email message needs an email address etc. If TS supports the PhoneManagement profile, then the correspondence between the Peer element and either a contact or a group of contacts in the Address book is also included in the complex peerType element.

A.1   Using the *peerType* within XML Schemas

The complex type `peerType` can be used in the XML schemas by including the following statement:

```
<import
   namespace="urn:schemas-upnp-org:phone:peer"
   schemaLocation="http://www.upnp.org/schemas/phone/peer-v1.xsd"/>
```

where the `schemaLocation` refers to the last updated schema file for the *Peer*.

A.2   Description of fields of a `peerType` complex type

This section gives a description of the elements defined in the peerType complex type.

```
<?xml version="1.0" encoding="utf-8"?>
<peer:peer
   xsi:schemaLocation="urn:schemas-upnp-org:phone:peer
   http://www.upnp.org/schemas/phone/peer-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:peer="urn:schemas-upnp-org:phone:peer">
   <peer:id>
      The identifier of the Peer (e.g., phone number, etc.)
   </peer:id>
   <peer:name>A user friendly name for the Peer</peer:name>
   <peer:contactInstanceId>
      The instance identifier for a contact referred by the Peer
   </peer:contactInstanceId>
   <peer:groupInstanceId>
      The instance identifier for a group referred by the Peer
   </peer:groupInstanceId>
</peer:peer>
```

id

> REQUIRED, xsd:string. Indicates the communication address or the identifier for the Peer (e.g., a telephone number, an e-mail address, an identifier of a group of contacts, etc).

name

> OPTIONAL, xsd:string. Indicates a user friendly name for the Peer.

contactInstanceId

OPTIONAL, xsd:unsignedInt. Is the instance identifier of the contact present in the *Phone Data Model's* Address Book for the referenced *Peer*. The value of the contactInstanceId is an unsigned integer. If there is no Instance in the *Address Book* for the referenced *Peer,* then the contactInstanceId value MUST be 0 (no match with the list of contacts in the Address Book). If the PhoneManagement profile is not supported or the relationship between the *Address Book* and the *Peer* is not used by the service, then this element MUST NOT be used. The contactInstanceId and groupInstanceId are mutually exclusive elements.

groupInstanceId

OPTIONAL, xsd:unsignedInt. Is the instance identifier of a group present in the *Phone Data Model's Address Book* for the referenced Peer. The value of groupInstanceId is an unsigned integer. If there is no Instance in the *Address Book* for this referenced *Peer*, then the groupInstanceId value MUST be 0 (no match with the list of groups in the *Address* Book). If the PhoneManagement profile is not supported or the relationship between the *Address Book* and the *Peer* is not used by the service, then this element MUST NOT be used. The contactInstanceId and groupInstanceId are mutually exclusive elements.

any

OPTIONAL. Attachment point for custom extensions.

A.3   `peerType` **Schema**

The following XML schema defines the peerType complex type.

```
<?xml version="1.0" encoding="utf-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema" xmlns:peer="urn:schemas-upnp-
org:phone:peer" targetNamespace="urn:schemas-upnp-org:phone:peer"
elementFormDefault="qualified" attributeFormDefault="qualified" version="1">
   <complexType name="peerType">
      <sequence>
         <element name="id" nillable="0">
            <annotation>
               <documentation>Id of the peer. The content depends on the context. For
example it can be a phone number, ad e-mail address and so on.</documentation>
            </annotation>
            <complexType>
               <simpleContent>
                  <extension base="string"/>
               </simpleContent>
            </complexType>
         </element>
         <element name="name" type="string" nillable="0" minOccurs="0">
            <annotation>
               <documentation>Textual name of the peer. In case the Phone Data Model is
supported, this  element MUST be the FormattedName in the address book.</documentation>
            </annotation>
         </element>
         <choice minOccurs="0">
            <element name="contactInstanceId" nillable="0">
               <annotation>
                  <documentation>The Instance Identifier of a Contact in the PDM address
book.</documentation>
               </annotation>
               <complexType>
                  <simpleContent>
                     <extension base="unsignedInt"/>
                  </simpleContent>
               </complexType>
            </element>
            <element name="groupInstanceId">
               <annotation>
                  <documentation>The Instance Identifier of a Group in the PDM address
book.</documentation>
               </annotation>
            </element>
         </choice>
         <any namespace="##other" minOccurs="0">
            <annotation>
               <documentation>Vendor defined extensions attachment point.</documentation>
            </annotation>
         </any>
      </sequence>
   </complexType>
</schema>
```

Appendix B.   XML Schema

This appendix provides the global XML Schema for syntactical validation of all the XML fragments used in the *CallManagement* service.

```xml
<?xml version="1.0" encoding="utf-8"?>
<schema targetNamespace="urn:schemas-upnp-org:phone:cams" xmlns:cams="urn:schemas-upnp-
org:phone:cams" xmlns="http://www.w3.org/2001/XMLSchema" attributeFormDefault="qualified"
elementFormDefault="qualified" xmlns:peer="urn:schemas-upnp-org:phone:peer">
  <import namespace="urn:schemas-upnp-org:phone:peer"
schemaLocation="http://www.upnp.org/schemas/phone/peer-v1.xsd"/>

  <simpleType name="targetNamesType">
  <restriction base="string">
    <enumeration value="TelCPName" />
    <enumeration value="TelCPID" />
    <enumeration value="Username" />
    <enumeration value="*" />
  </restriction>
  </simpleType>

  <simpleType name="callStatusValueType">
  <restriction base="string">
    <enumeration value="Ringing" />
    <enumeration value="Dialing" />
    <enumeration value="Calling" />
    <enumeration value="Connected" />
    <enumeration value="Talking" />
    <enumeration value="Disconnected" />
    <enumeration value="SendingModifyRequest" />
    <enumeration value="ReceivingModifyRequest" />
    <enumeration value="Modified" />
    <enumeration value="ModifiyFailed" />
  </restriction>
  </simpleType>

  <simpleType name="callStatusReasonType">
  <restriction base="string">
    <enumeration value="Accepted by TS" />
    <enumeration value="Initiated by TS" />
    <enumeration value="Busy" />
    <enumeration value="Not Acceptable Capability" />
    <enumeration value="Not Found" />
    <enumeration value="Rejected by TS" />
    <enumeration value="Rejected" />
    <enumeration value="Cancelled" />
  </restriction>
  </simpleType>

  <simpleType name="priorityValueType">
  <restriction base="string">
    <enumeration value="Emergency" />
    <enumeration value="Normal" />
  </restriction>
  </simpleType>

  <simpleType name="mediaCapabilityFormatType">
  <restriction base="string">
    <enumeration value="SDP" />
  </restriction>
  </simpleType>

  <complexType name="callBackInfoType">
    <choice minOccurs="0" maxOccurs="unbounded">
      <element name="callBackInfo" form="unqualified">
        <complexType>
          <sequence>
            <element name="callBackID" form="unqualified" type="string" />
            <element name="callee" form="unqualified" maxOccurs="unbounded">
              <complexType>
                <sequence>
                  <element ref="peer:id" />
                </sequence>
```

```
                    </complexType>
                  </element>
                </sequence>
              </complexType>
            </element>
        </choice>
    </complexType>

    <complexType name="TCListType">
      <sequence>
        <element name="TC" form="unqualified" minOccurs="0" maxOccurs="unbounded">
          <complexType>
            <sequence>
              <element name="UDN" form="unqualified" type="string" minOccurs="0" />
              <element name="mediaSessionID" form="unqualified" type="string" minOccurs="0"
/>
            </sequence>
          </complexType>
        </element>
      </sequence>
    </complexType>

    <complexType name="callInfoType">
      <sequence>
        <element name="callID" form="unqualified" type="string" minOccurs="1" />
        <element name="targetNames" form="unqualified" nillable="true" minOccurs="1">
          <complexType>
            <simpleContent>
              <extension base="string">
                <attribute name="type" form="unqualified" type="cams:targetNamesType"
use="required" />
              </extension>
            </simpleContent>
          </complexType>
        </element>
        <element name="callStatus" form="unqualified" nillable="true" minOccurs="1">
          <complexType>
            <simpleContent>
              <extension base="cams:callStatusValueType">
                <attribute name="reason" form="unqualified" type="cams:callStatusReasonType"
use="optional" />
              </extension>
            </simpleContent>
          </complexType>
        </element>
        <element name="priority" form="unqualified" type="cams:priorityValueType"
minOccurs="0" maxOccurs="1" />
        <element name="remoteParty" form="unqualified" minOccurs="0" maxOccurs="1">
          <complexType>
            <sequence>
              <element ref="peer:id" minOccurs="0" maxOccurs="unbounded" />
            </sequence>
          </complexType>
        </element>
        <element name="TCList" form="unqualified" minOccurs="0" maxOccurs="1"
type="cams:TCListType" />
        <element name="enableMediaMixing" form="unqualified" type="integer" minOccurs="0" />
        <element name="shareMedia" form="unqualified" type="string" minOccurs="0" />
        <element name="mediaCapability" form="unqualified" nillable="true" minOccurs="0"
maxOccurs="1">
          <complexType>
            <simpleContent>
              <extension base="string">
                <attribute name="format" form="unqualified"
type="cams:mediaCapabilityFormatType" use="optional" />
              </extension>
            </simpleContent>
          </complexType>
        </element>
        <element name="nativeMediaCapability" form="unqualified" nillable="true"
minOccurs="0" maxOccurs="1">
          <complexType>
            <simpleContent>
              <extension base="string">
                <attribute name="format" form="unqualified" type="string" use="optional" />
```

```
                  </extension>
                </simpleContent>
              </complexType>
            </element>
        </sequence>
      </complexType>

  <element name="callInfo" type="cams:callInfoType" />

  <element name="callInfoList">
    <complexType>
      <choice minOccurs="0" maxOccurs="unbounded">
        <element name="callInfo" form="unqualified" type="cams:callInfoType" />
      </choice>
    </complexType>
  </element>

  <element name="mediaCapabilityInfo">
    <complexType>
      <sequence>
        <element name="mediaMixingCapability" form="unqualified" type="string"
minOccurs="0" />
        <element name="mediaSharingCapability" form="unqualified" type="string"
minOccurs="0" />
        <element name="enableMediaMixing" form="unqualified" type="integer" minOccurs="0"
/>
        <element name="shareMedia" form="unqualified" type="string" minOccurs="0" />
        <element name="mediaCapability" form="unqualified" nillable="true" minOccurs="0"
maxOccurs="1">
          <complexType>
            <simpleContent>
              <extension base="string">
                <attribute name="format" form="unqualified"
type="cams:mediaCapabilityFormatType" />
              </extension>
            </simpleContent>
          </complexType>
        </element>
        <element name="nativeMediaCapability" form="unqualified" nillable="true"
minOccurs="0" maxOccurs="1">
          <complexType>
            <simpleContent>
              <extension base="string">
                <attribute name="format" form="unqualified"
type="cams:mediaCapabilityFormatType" />
              </extension>
            </simpleContent>
          </complexType>
        </element>
      </sequence>
    </complexType>
  </element>

  <element name="callLogs">
    <complexType>
      <choice minOccurs="0" maxOccurs="unbounded">
        <element name="call" form="unqualified">
          <complexType>
            <sequence>
              <element name="type" form="unqualified" type="string" />
              <element name="caller" form="unqualified" maxOccurs="unbounded">
                <complexType>
                  <sequence>
                    <element ref="peer:id" />
                    <element ref="peer:name" minOccurs="0" />
                  </sequence>
                </complexType>
              </element>
              <element name="callee" form="unqualified" maxOccurs="unbounded">
                <complexType>
                  <sequence>
                    <element ref="peer:id" />
                    <element ref="peer:name" minOccurs="0" />
                  </sequence>
                </complexType>
```

```
            </element>
            <element name="startDateTime" form="unqualified" type="string" />
            <element name="duration" form="unqualified" type="string" minOccurs="0" />
          </sequence>
          <attribute name="direction" form="unqualified" type="string" />
          <attribute name="success" form="unqualified" type="string" />
        </complexType>
      </element>
    </choice>
  </complexType>
</element>

<element name="CallBackAvailability">
  <complexType>
    <choice maxOccurs="unbounded">
      <element name="callBack" form="unqualified">
        <complexType>
          <sequence>
            <element name="callBackID" form="unqualified" type="string" />
          </sequence>
        </complexType>
      </element>
    </choice>
  </complexType>
</element>

<element name="callBackInfoList" msdata:IsDataSet="true" msdata:Locale="en-US"
msdata:Prefix="cams">
  <complexType>
    <choice minOccurs="0" maxOccurs="unbounded">
      <element name="callBackInfo" form="unqualified" type="cams:callBackInfoType" />
    </choice>
  </complexType>
</element>

<element name="TCList" type="cams:TCListType" />

</schema>
```
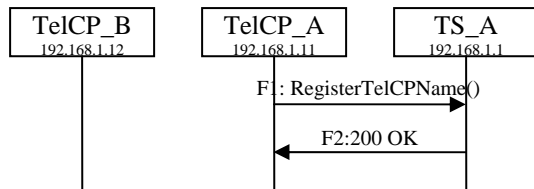
Appendix C.   Sequence Examples

C.1   Register TelCPName

C.1.1   Figure

```
TelCP_B          TelCP_A          TS_A
192.168.1.12     192.168.1.11     192.168.1.1
   |                |                |
   |         F1 : RegisterTelCPName()|
   |                |--------------->|
   |                |                |
   |                |   F2:200 OK    |
   |                |<---------------|
   |                |                |
```

C.1.2   F1

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#RegisterTelCPName"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:RegisterTelCPName xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <CurrentSecretKey></CurrentSecretKey>
  </u:RegisterTelCPName>
 </s:Body>
</s:Envelope>
```
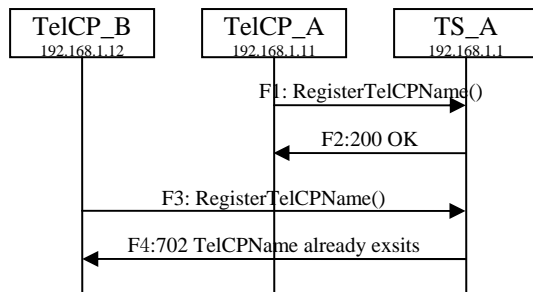
C.1.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:RegisterTelCPNameResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
   <NewSecretKey>secret101</NewSecretKey>
   <Expires>300</Expires>
  </u:RegisterTelCPNameResponse>
 </s:Body>
</s:Envelope>
```

C.2   Register TelCPName (But the specified TelCPName is already in use.)

C.2.1   Figure

C.2.2   F1 and F2 are the same as "C.1 Register TelCPName"

C.2.3   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#RegisterTelCPName"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:RegisterTelCPName xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <CurrentSecretKey></CurrentSecretKey>
  </u:RegisterTelCPName>
 </s:Body>
</s:Envelope>
```

C.2.4   F4

```
HTTP/1.1 500 Internal Server Error
Content-Length: [bytes in body]

<s:Envelope
 xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
 s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <s:Fault>
  <faultcode>s:Client</faultcode>
  <faultstring>UPnPError</faultstring>
  <detail>
   <UPnPError xmlns="urn:schemas-upnp-org:control-1-0">
    <errorCode>702</errorCode>
    <errorDescription>TelCPName already exists</errorDescription>
   </UPnPError>
  </detail>
```
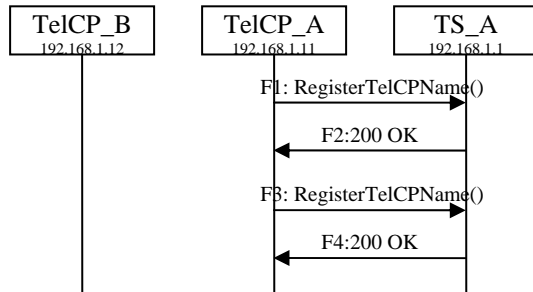
```
     </s:Fault>
    </s:Body>
   </s:Envelope>
```

C.3   Keep using the same TelCPName

C.3.1   Figure

```
┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│  TelCP_B     │  │  TelCP_A     │  │   TS_A       │
│ 192.168.1.12 │  │ 192.168.1.11 │  │ 192.168.1.1  │
└──────┬───────┘  └──────┬───────┘  └──────┬───────┘
       │                 │                 │
       │          F1: RegisterTelCPName()  │
       │                 │────────────────▶│
       │                 │   F2:200 OK     │
       │                 │◀────────────────│
       │                 │                 │
       │          F3: RegisterTelCPName()  │
       │                 │────────────────▶│
       │                 │   F4:200 OK     │
       │                 │◀────────────────│
       │                 │                 │
```

C.3.2   F1 and F2 are the same as "C.1 Register TelCPName"

C.3.3   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#RegisterTelCPName"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:RegisterTelCPName xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <CurrentSecretKey>secret101</CurrentSecretKey>
  </u:RegisterTelCPName>
 </s:Body>
</s:Envelope>
```
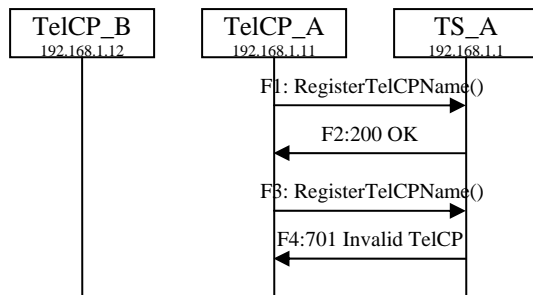
C.3.4   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
```

```
  <u:RegisterTelCPNameResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
   <NewSecretKey>secret111</NewSecretKey>
   <Expires>300</Expires>
  </u:RegisterTelCPNameResponse>
 </s:Body>
</s:Envelope>
```

C.4   Keep using the same TelCPName (But the specified Secret Key is invalid.)

C.4.1   Figure

```
 ┌──────────────┐   ┌──────────────┐   ┌──────────────┐
 │   TelCP_B    │   │   TelCP_A    │   │    TS_A      │
 │ 192.168.1.12 │   │ 192.168.1.11 │   │ 192.168.1.1  │
 └──────────────┘   └──────────────┘   └──────────────┘
        │                  │                  │
        │          F1: RegisterTelCPName()    │
        │                  │ ───────────────► │
        │                  │                  │
        │             F2:200 OK               │
        │                  │ ◄─────────────── │
        │                  │                  │
        │          F3: RegisterTelCPName()    │
        │                  │ ───────────────► │
        │                  │                  │
        │           F4:701 Invalid TelCP      │
        │                  │ ◄─────────────── │
        │                  │                  │
```

C.4.2   F1 and F2 are the same as "C.1 Register TelCPName"

C.4.3   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#RegisterTelCPName"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:RegisterTelCPName xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <CurrentSecretKey>wrongkey</CurrentSecretKey>
  </u:RegisterTelCPName>
 </s:Body>
</s:Envelope>
```

C.4.4   F4

```
HTTP/1.1 500 Internal Server Error
Content-Length: [bytes in body]

<s:Envelope
 xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
 s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <s:Fault>
```

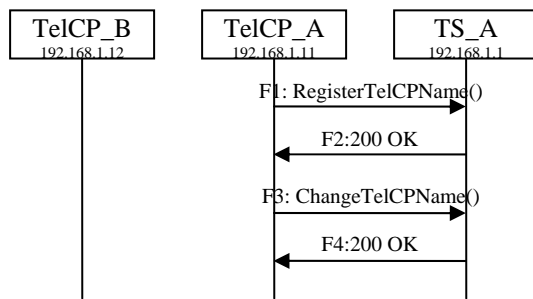```
   <faultcode>s:Client</faultcode>
   <faultstring>UPnPError</faultstring>
   <detail>
    <UPnPError xmlns="urn:schemas-upnp-org:control-1-0">
     <errorCode>701</errorCode>
     <errorDescription>Invalid TelCP</errorDescription>
    </UPnPError>
   </detail>
  </s:Fault>
 </s:Body>
</s:Envelope>
```

## C.5   Change TelCPName

### C.5.1     Figure



### C.5.2     F1 and F2 are the same as "C.1 Register TelCPName"

### C.5.3     F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#ChangeTelCPName"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:ChangeTelCPName xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <CurrentTelCPName>TV@Living</CurrentTelCPName>
      <CurrentSecretKey>secret101</CurrentSecretKey>
      <NewTelCPName>HD-TV@Living</NewTelCPName>
  </u:ChangeTelCPName>
 </s:Body>
</s:Envelope>
```

### C.5.4     F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
```

```
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:ChangeTelCPNameResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
   <NewSecretKey>secret111</NewSecretKey>
   <Expires>300</Expires>
  </u:ChangeTelCPNameResponse>
 </s:Body>
</s:Envelope>
```

C.6   Change TelCPName (But the specified Secret Key is invalid.)

C.6.1   Figure
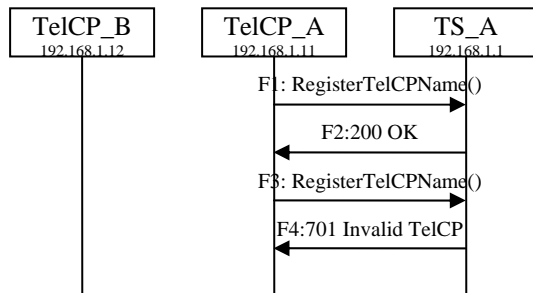
C.6.2   F1 and F2 are the same as "C.1 Register TelCPName"

C.6.3   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#ChangeTelCPName"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:ChangeTelCPName xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <CurrentTelCPName>TV@Living</CurrentTelCPName>
   <CurrentSecretKey>wrongcode</CurrentSecretKey>
   <NewTelCPName>HD-TV@Living</NewTelCPName>
  </u:ChangeTelCPName>
 </s:Body>
</s:Envelope>
```

C.6.4   F4

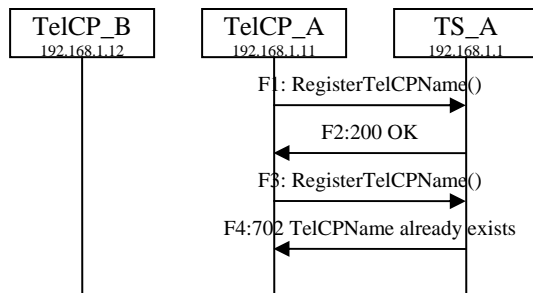HTTP/1.1 500 Internal Server Error

Content-Length: [bytes in body]

```
<s:Envelope
 xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
 s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <s:Fault>
  <faultcode>s:Client</faultcode>
  <faultstring>UPnPError</faultstring>
  <detail>
   <UPnPError xmlns="urn:schemas-upnp-org:control-1-0">
    <errorCode>701</errorCode>
    <errorDescription>Invalid TelCP</errorDescription>
   </UPnPError>
  </detail>
  </s:Fault>
 </s:Body>
</s:Envelope>
```

C.7   Change TelCPName (But the specified TelCPName is already in use.)

C.7.1   Figure

C.7.2   F1 and F2 are the same as "C.1 Register TelCPName"

C.7.3   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#ChangeTelCPName"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:ChangeTelCPName xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <CurrentTelCPName>TV@Living</CurrentTelCPName>
   <CurrentSecretKey>secret101</CurrentSecretKey>
   <NewTelCPName>HD-TV@Living</NewTelCPName>
  </u:ChangeTelCPName>
```
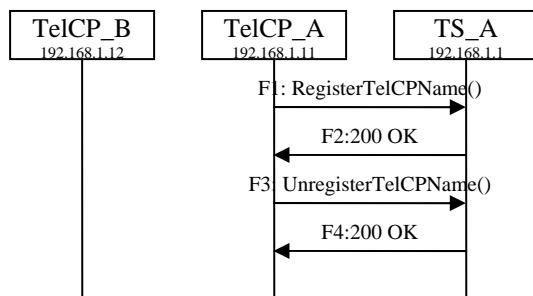
```
  </s:Body>
 </s:Envelope>
```

C.7.4   F4

```
HTTP/1.1 500 Internal Server Error
Content-Length: [bytes in body]

<s:Envelope
 xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
 s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <s:Fault>
  <faultcode>s:Client</faultcode>
  <faultstring>UPnPError</faultstring>
  <detail>
   <UPnPError xmlns="urn:schemas-upnp-org:control-1-0">
    <errorCode>702</errorCode>
    <errorDescription>TelCPName already exists</errorDescription>
   </UPnPError>
  </detail>
  </s:Fault>
 </s:Body>
</s:Envelope>
```

C.8   Unregister TelCPName

C.8.1   Figure

C.8.2   F1 and F2 are the same as "C.1 Register TelCPName"

C.8.3   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:CallManagement:1#UnregisterTelCPName"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
```

```
<u:UnregisterTelCPName xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
 <TelCPName>TV@Living</TelCPName>
 <SecretKey>secret101</SecretKey>
</u:UnregisterTelCPName>
</s:Body>
</s:Envelope>
```

C.8.4   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:UnregisterTelCPNameResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```
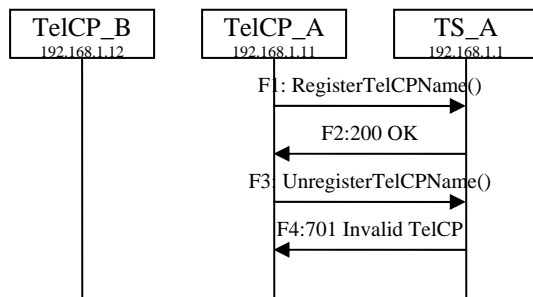
C.9   Unregister TelCPName (But the specified TelCPName does not exist.)

C.9.1   Figure

C.9.2   F1 and F2 are the same as "C.1 Register TelCPName"

C.9.3   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:CallManagement:1#UnregisterTelCPName"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
```

```
 <s:Body>
  <u:UnregisterTelCPName xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>Alice's TV</TelCPName>
   <SecretKey>secret101</SecretKey>
  </u:UnregisterTelCPName>
 </s:Body>
</s:Envelope>
```
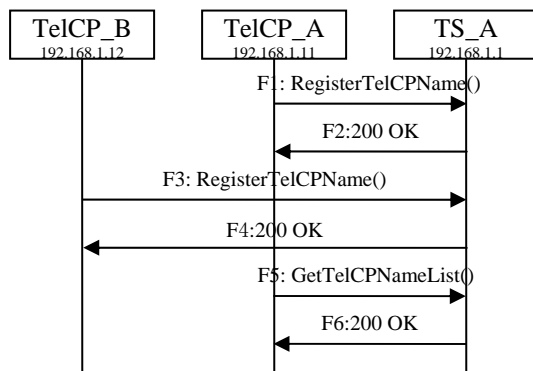
C.9.4   F4

```
HTTP/1.1 500 Internal Server Error
Content-Length: [bytes in body]

<s:Envelope
 xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
 s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <s:Fault>
  <faultcode>s:Client</faultcode>
  <faultstring>UPnPError</faultstring>
  <detail>
   <UPnPError xmlns="urn:schemas-upnp-org:control-1-0">
    <errorCode>701</errorCode>
    <errorDescription>Invalid TelCP</errorDescription>
   </UPnPError>
  </detail>
  </s:Fault>
 </s:Body>
</s:Envelope>
```

C.10 Get existing TelCPNames

C.10.1   Figure

C.10.2   F1 and F2 are the same as "C.1 Register TelCPName"

C.10.3   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#RegisterTelCPName"
CONTENT-TYPE: text/xml ; charset="utf-8"
```

```
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:RegisterTelCPName xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>Alice's TV</TelCPName>
   <CurrentSecretKey></CurrentSecretKey>
  </u:RegisterTelCPName>
 </s:Body>
</s:Envelope>
```

C.10.4   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:RegisterTelCPNameResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
   <NewSecretKey>secret111</NewSecretKey>
   <Expires>300</Expires>
  </u:RegisterTelCPNameResponse>
 </s:Body>
</s:Envelope>
```

C.10.5   F5

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetTelCPNameList"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetTelCPNameList xmlns:u="urn:schemas-upnp-org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.10.6   F6

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
```

```
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetTelCPNameListResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
    <TelCPNameList>TV@Living, Alice's TV</TelCPNameList>
  </u:GetTelCPNameListResponse>
 </s:Body>
</s:Envelope>
```

C.11 Get existing TelCPNames (But no TelCP exists)

C.11.1   Figure

C.11.2   F1

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetTelCPNameList"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetTelCPNameList xmlns:u="urn:schemas-upnp-org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```
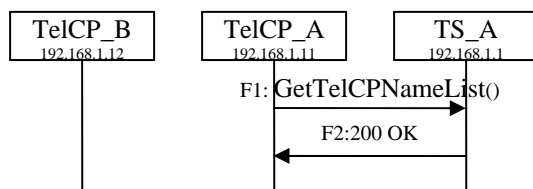
C.11.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetTelCPNameListResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
    <TelCPNameList></TelCPNameList>
```
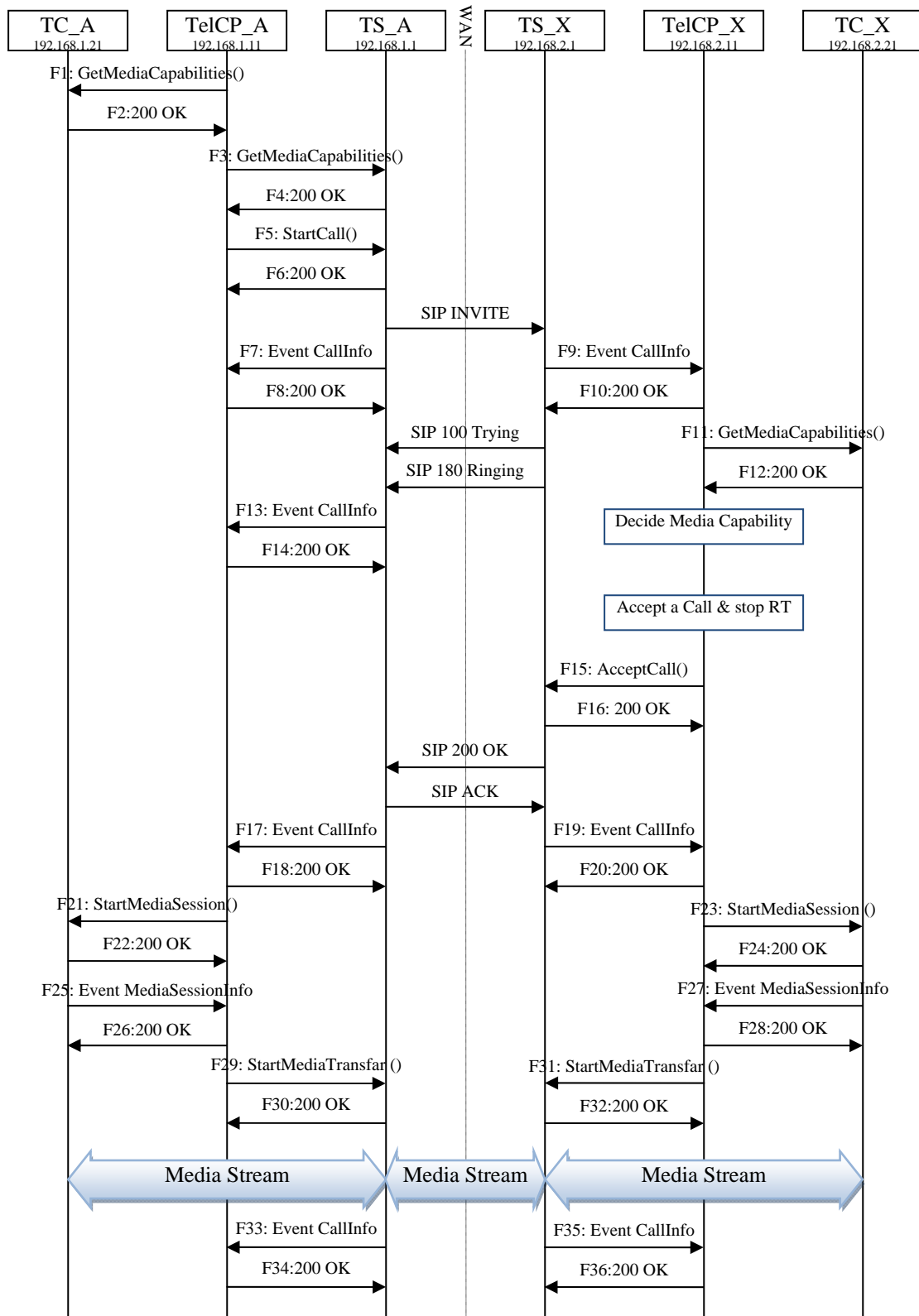
```
     </u:GetTelCPNameListResponse>
    </s:Body>
   </s:Envelope>
```

C.12 Create a Call

C.12.1   Figure

TC_A	TelCP_A	TS_A	WAN	TS_X	TelCP_X	TC_X
192.168.1.21	192.168.1.11	192.168.1.1		192.168.2.1	192.168.2.11	192.168.2.21

F1: GetMediaCapabilities()

F2:200 OK

F3: GetMediaCapabilities()

F4:200 OK

F5: StartCall()

F6:200 OK

SIP INVITE

F7: Event CallInfo

F9: Event CallInfo

F8:200 OK

F10:200 OK

SIP 100 Trying

F11: GetMediaCapabilities()

SIP 180 Ringing

F12:200 OK

F13: Event CallInfo

Decide Media Capability

F14:200 OK

Accept a Call & stop RT

F15: AcceptCall()

F16: 200 OK

SIP 200 OK

SIP ACK

F17: Event CallInfo

F19: Event CallInfo

F18:200 OK

F20:200 OK

F21: StartMediaSession()

F23: StartMediaSession ()

F22:200 OK

F24:200 OK

F25: Event MediaSessionInfo

F27: Event MediaSessionInfo

F26:200 OK

F28:200 OK

F29: StartMediaTransfer ()

F31: StartMediaTransfer ()

F30:200 OK

F32:200 OK

Media Stream   Media Stream   Media Stream

F33: Event CallInfo

F35: Event CallInfo

F34:200 OK

F36:200 OK

C.12.2   F1

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.21:10021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.12.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12021 RTP/AVP 96
c=IN IP4 192.168.1.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120 0086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
```

```
        &lt;/mms:mediaCapabilityInfo&gt;
        </SupportedMediaCapabilityInfo>
     </u:GetMediaCapabilitiesResponse>
    </s:Body>
   </s:Envelope>
```

C.12.4   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service: CallManagement:1">
    <TCMediaCapabilityInfo></TCMediaCapabilityInfo>
   </u:GetMediaCapabilities>
   </s:Body>
</s:Envelope>
```

C.12.5   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
   <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;cams:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
      http://www.upnp.org/schemas/phone/cams-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
```

```
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
  &lt;/cams:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
 </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.12.6   F5

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName></TelCPName>
   <SecretKey></SecretKey>
   <CalleeID>tel:0774940201</CalleeID>
   <CallPriority>Normal</CallPriority>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
   <CallMode>Non-Monopolize</CallMode>
  </u:StartCall>
 </s:Body>
</s:Envelope>
```

C.12.7   F6

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
```

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1">
   <CallID>call101</CallID>
  </m:StartCallResponse>
 </s:Body>
</s:Envelope>
```

C.12.8   F7

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call101&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;TV@Living&lt;/targetNames&gt;
  &lt;callStatus&gt;Dialing&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
  &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.12.9   F8

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.12.10 F9

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call201&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Ringing&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
   &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.12.11 F10

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.12.12 F11

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.21:20021
Content-Length: [bytes in body]
```

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.12.13 F12

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
        http://www.upnp.org/schemas/phone/mms-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22021 RTP/AVP 96
c=IN IP4 192.168.2.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.12.14 F13

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
```

```
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call101&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus&gt;Calling&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
  &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.12.15 F14

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.12.16 F15

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#AcceptCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:AcceptCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
```

```
   <TelCPName></TelCPName>
   <SecretKey></SecretKey>
   <TargetCallID>call201</TargetCallID>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
&lt;cams:mediaCapabilityInfo
 xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
 http://www.upnp.org/schemas/phone/cams-v1.xsd"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
 &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/mediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
   <CallMode>"Non-Monopolize"</CallMode>
  </u:AcceptCall>
 </s:Body>
</s:Envelope>
```

C.12.17 F16

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <m:AcceptCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1"
/>
 </s:Body>
</s:Envelope>
```

C.12.18 F17

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
```

```
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt; *&lt;/targetNames&gt;
   &lt;callStatus&gt;Connected&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
       &lt;/mediaCapability&gt;
    &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
</e:propertyset>
```

C.12.19 F18

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.12.20 F19

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call201&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
```

<callStatus>Connected</callStatus>
<priority>Normal</priority>
<remoteParty>
<peer:id>*0355550101*</peer:id>
</remoteParty>
<mediaCapability format="SDP">v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
</mediaCapability>
</cams:callInfo></CallInfo>
</e:property>
</e:propertyset>

C.12.21 F20

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.12.22 F21

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.21:10021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
      &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;
     </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
```

```
</s:Envelope>
```

C.12.23 F22

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
   <MediaSessionID>media101</MediaSessionID>
   <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
       &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;
     </TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
  </s:Body>
</s:Envelope>
```

C.12.24 F23

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2:21:20021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
```

```
        xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
        &lt;/mediaCapability&gt;
        &lt;/mms:mediaCapabilityInfo&gt;
        </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.12.25 F24

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <MediaSessionID>media201</MediaSessionID>
     <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
        http://www.upnp.org/schemas/phone/mms-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
        &lt;/mediaCapability&gt;
        &lt;/mms:mediaCapabilityInfo&gt;</TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
 </s:Body>
</s:Envelope>
```

C.12.26 F25

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
```

```
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10021
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;mms:mediaSessionInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
   http://www.upnp.org/schemas/phone/mms-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
   &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
  </e:property>
</e:propertyset>
```

C.12.27 F26

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.12.28 F27

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20021
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;mms:mediaSessionInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
   http://www.upnp.org/schemas/phone/mms-v1.xsd"
```

```
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
        &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
        &lt;/mediaCapability&gt;
      &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
   </e:property>
</e:propertyset>
```

C.12.29 F28

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.12.30 F29

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
      <TelCPName></TelCPName>
      <SecretKey></SecretKey>
      <TargetCallID>call101</TargetCallID>
      <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;cams:TCList
       xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
       http://www.upnp.org/schemas/phone/cams-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
      &lt;TC&gt;
       &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
       &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
      &lt;/TC&gt;
      &lt;/cams:TCList&gt;</TCList>
      <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;cams:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
       http://www.upnp.org/schemas/phone/cams-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
```

```
    o=- 0 0 IN IP4 192.168.1.11
    s=-
    c=IN IP4 192.168.1.11
    t=0 0
    m=audio 11021 RTP/AVP 0
    c=IN IP4 192.168.1.21
    a=rtpmap:0 PCMU/8000
    a=ptime:20
        &lt;/mediaCapability&gt;
      &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
     </u:StartMediaTransfer>
   </s:Body>
</s:Envelope>
```

C.12.31 F30

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.12.32 F31

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
    <TelCPName></TelCPName>
    <SecretKey></SecretKey>
    <TargetCallID>call201</TargetCallID>
    <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:TCList
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
```

```
        &lt;/TC&gt;
        &lt;/cams:TCList&gt;</TCList>
       <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
        &lt;cams:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
        http://www.upnp.org/schemas/phone/cams-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
         &lt;/mediaCapability&gt;
        &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
      </u:StartMediaTransfer>
     </s:Body>
    </s:Envelope>
```

C.12.33   F32

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
</s:Body>
</s:Envelope>
```

C.12.34   F33

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
```

```
&lt;cams:callInfo
 xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
 http://www.upnp.org/schemas/phone/cams-v1.xsd"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:cams="urn:schemas-upnp-org:phone:cams"
 xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
 &lt;callID&gt;call101&lt;/callID&gt;
 &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
 &lt;callStatus&gt;Talking&lt;/callStatus&gt;
 &lt;priority&gt;Normal&lt;/priority&gt;
 &lt;remoteParty&gt;
  &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
 &lt;/remoteParty&gt;
 &lt;TCList&gt;
  &lt;TC&gt;
   &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
   &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
  &lt;/TC&gt;
 &lt;/TCList&gt;
 &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
  &lt;/mediaCapability&gt;
 &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
</e:propertyset>
```

C.12.35   F34

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.12.36   F35

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
```

```
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:cams="urn:schemas-upnp-org:phone:cams"
xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
&lt;callID&gt;call201&lt;/callID&gt;
&lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
&lt;callStatus&gt;Talking&lt;/callStatus&gt;
&lt;priority&gt;Normal&lt;/priority&gt;
&lt;remoteParty&gt;
 &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
&lt;/remoteParty&gt;
&lt;TCList&gt;
 &lt;TC&gt;
   &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
   &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
 &lt;/TC&gt;
&lt;/TCList&gt;
&lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
  &lt;/mediaCapability&gt;
 &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
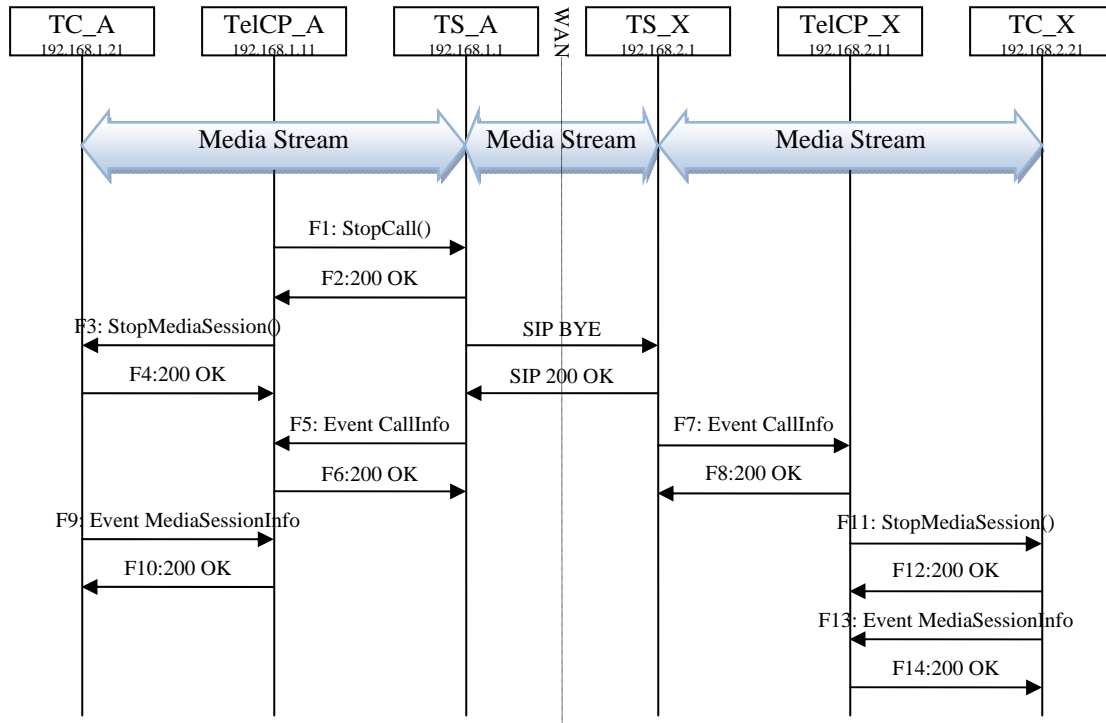```

## C.12.37  F36

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.13 Terminate a Call

C.13.1   Figure

C.13.2   F1

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StopCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName></TelCPName>
   <SecretKey></SecretKey>
   <CallID>cal101</CallID>
  </u:StopCall>
 </s:Body>
</s:Envelope>
```

C.13.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
```

```
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopCallResponse xmlns:u="urn:schemas-upnp-org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.13.4   F3

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StopMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.21:10021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopMediaSession xmlns:u="urn:schemas-upnp-org:service: MediaManagement:1">
   <TargetMediaSessionID>media101</TargetMediaSessionID>
  </u:StopMediaSession>
 </s:Body>
</s:Envelope>
```

C.13.5   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1" />
 </s:Body>
</s:Envelope>
```

C.13.6   F5

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive
```

```
<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Disconnected&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;ID of the Peer&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
   &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.13.7   F6

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.13.8   F7

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
```

```
  <e:property>
   <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call201&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Disconnected&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/mediaCapability&gt;
    &lt;/cams:callInfo&gt;</CallInfo>
   </e:property>
  </e:propertyset>
```

C.13.9   F8

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.13.10   F9

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10021
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
```

```
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
      &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
      &lt;mediaSessionStatus&gt;Stopped&lt;/mediaSessionStatus&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
  o=- 0 0 IN IP4 192.168.1.21
  s=-
  c=IN IP4 192.168.1.21
  t=0 0
  m=audio 11021 RTP/AVP 0
  c=IN IP4 192.168.1.21
  a=rtpmap:0 PCMU/8000
  a=ptime:20
       &lt;/mediaCapability&gt;
     &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
   </e:property>
  </e:propertyset>
```

C.13.11 F10

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.13.12 F11

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StopMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.21:20021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopMediaSession xmlns:u="urn:schemas-upnp-org:service: MediaManagement:1">
   <TargetMediaSessionID>media201</TargetMediaSessionID>
  </u:StopMediaSession>
 </s:Body>
</s:Envelope>
```

C.13.13 F12

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
```

```
  <u:StopMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1" />
 </s:Body>
</s:Envelope>
```

C.13.14 F13

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20021
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
   &lt;mediaSessionStatus&gt;Stopped&lt;/mediaSessionStatus&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
 </e:property>
</e:propertyset>
```
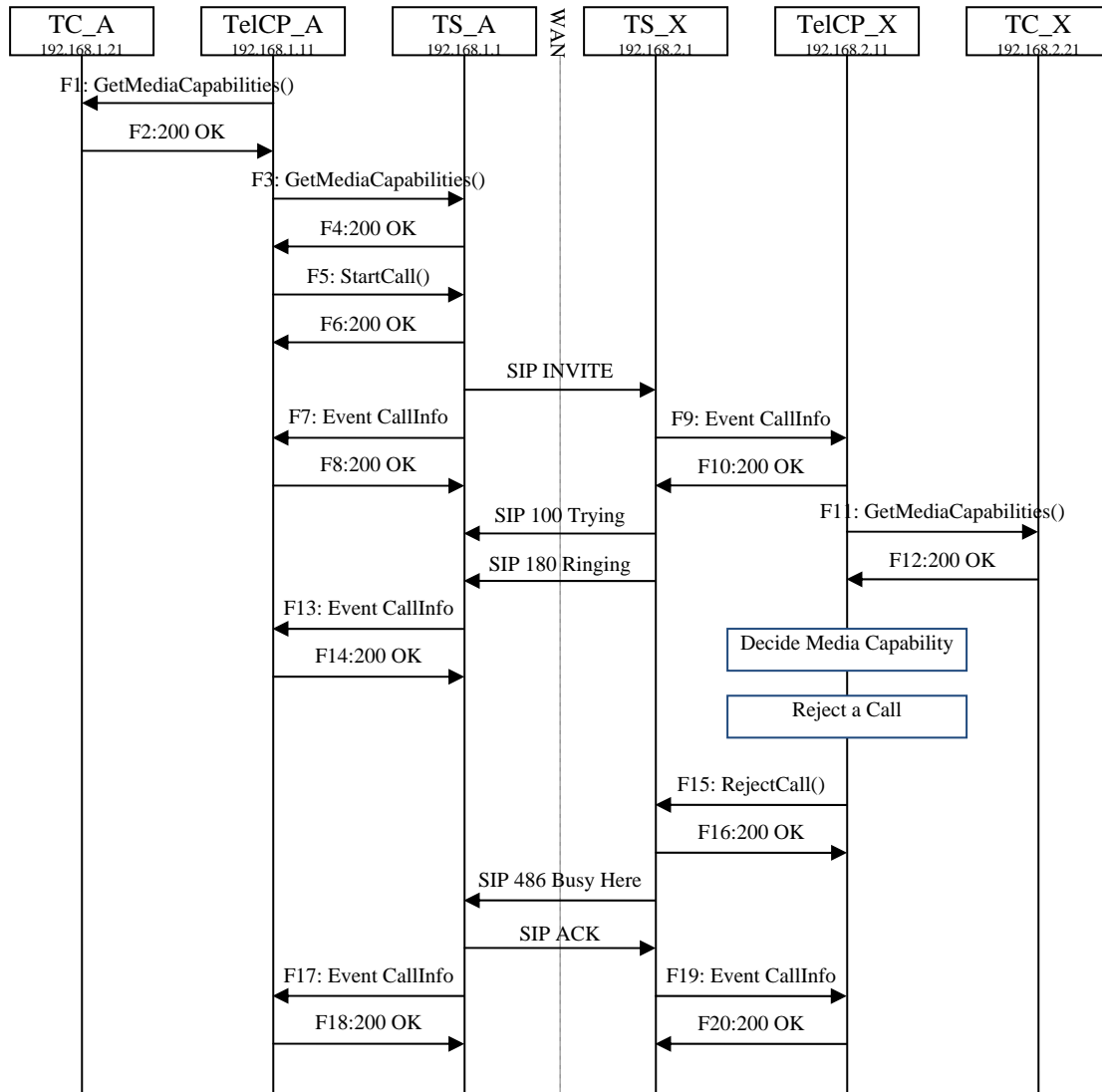
C.13.15 F14

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.14 Reject an incoming Call

C.14.1   Figure

C.14.2   F1 to F14 are the same as "C.12 Create a Call"

C.14.3   F15

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#RejectCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
```

```
  <s:Body>
   <u:RejectCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
    <TelCPName></TelCPName>
    <SecretKey></SecretKey>
    <TargetCallID>call201</TargetCallID>
    <RejectReason>Busy</RejectReason>
   </u:RejectCall>
  </s:Body>
 </s:Envelope>
```

C.14.4   F16

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <m:RejectCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1"
/>
 </s:Body>
</s:Envelope>
```

C.14.5   F17

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call101&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus reason="Busy"gt;Disconnected&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
```

```
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.14.6   F18

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.14.7   F19

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus reason="Busy"&gt;Disconnected&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
```

</cams:callInfo></CallInfo>
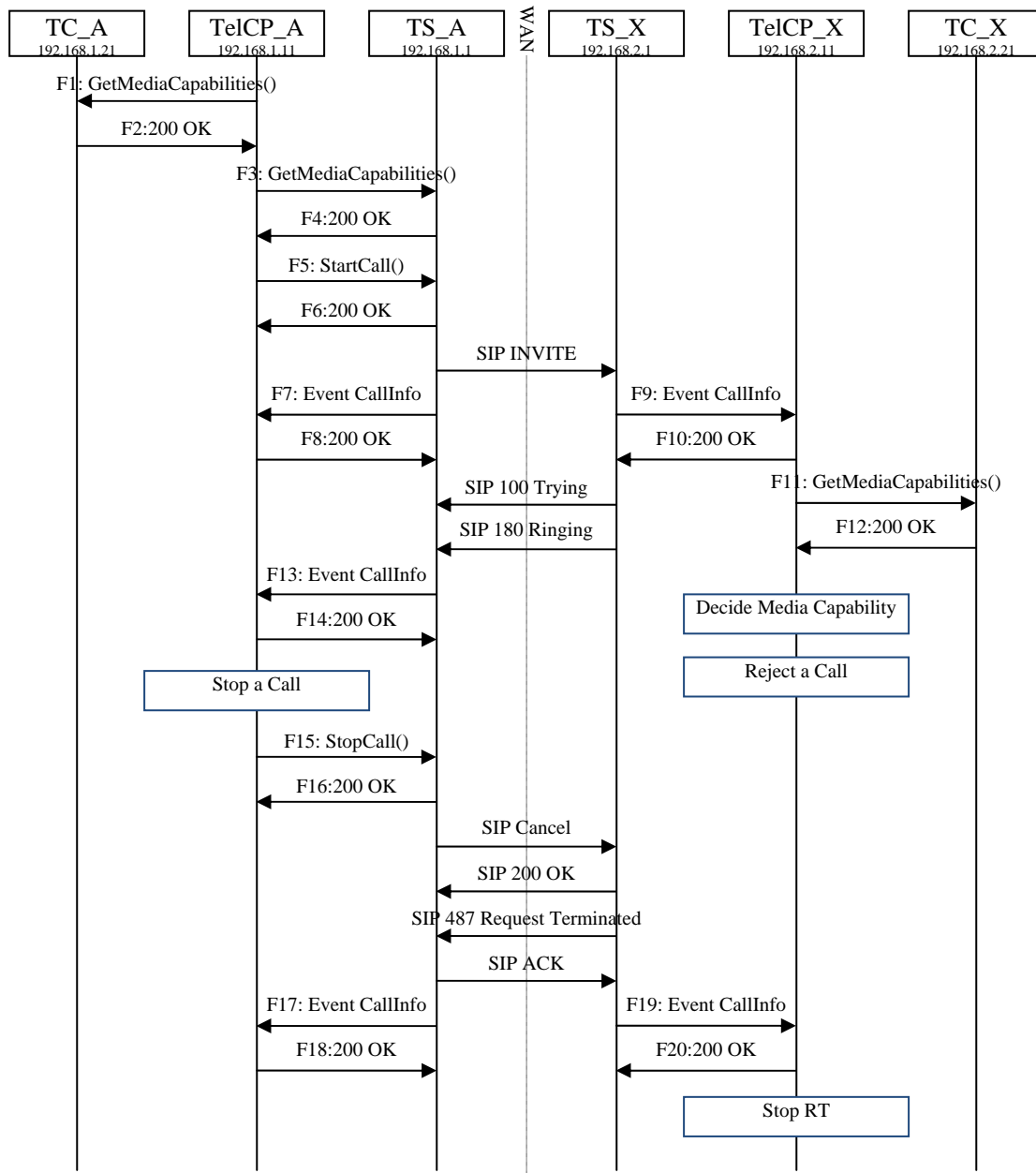   </e:property>
  </e:propertyset>

C.14.8   F20

HTTP/1.1 200 OK
Content-Length: 0

C.15   Cancel an outgoing Call

C.15.1   Figure

C.15.2   F1 to F14 are the same as "C.12 Create a Call"

C.15.3   F15

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StopCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName></TelCPName>
   <SecretKey></SecretKey>
   <CallID>call101</CallID>
  </u:StopCall>
 </s:Body>
</s:Envelope>
```

C.15.4   F16

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <m:StopCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.15.5   F17

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
```

```
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:cams"
        xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
        &lt;callID&gt;call101&lt;/callID&gt;
        &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
        &lt;callStatus reason="Cancelled"&gt;Disconnected&lt;/callStatus&gt;
        &lt;priority&gt;Normal&lt;/priority&gt;
        &lt;remoteParty&gt;
        &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
        &lt;/remoteParty&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
        &lt;/mediaCapability&gt;
      &lt;/cams:callInfo&gt;</CallInfo>
    </e:property>
</e:propertyset>
```

C.15.6   F18

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.15.7   F19

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
  <e:property>
    <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:callInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
      http://www.upnp.org/schemas/phone/cams-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:cams"
      xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
      &lt;callID&gt;call101&lt;/callID&gt;
      &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
      &lt;callStatus reason="Cancelled"&gt;Disconnected&lt;/callStatus&gt;
      &lt;priority&gt;Normal&lt;/priority&gt;
      &lt;remoteParty&gt;
      &lt;peer:id&gt;0355550101;/peer:id&gt;
```

```
    &lt;/remoteParty&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```
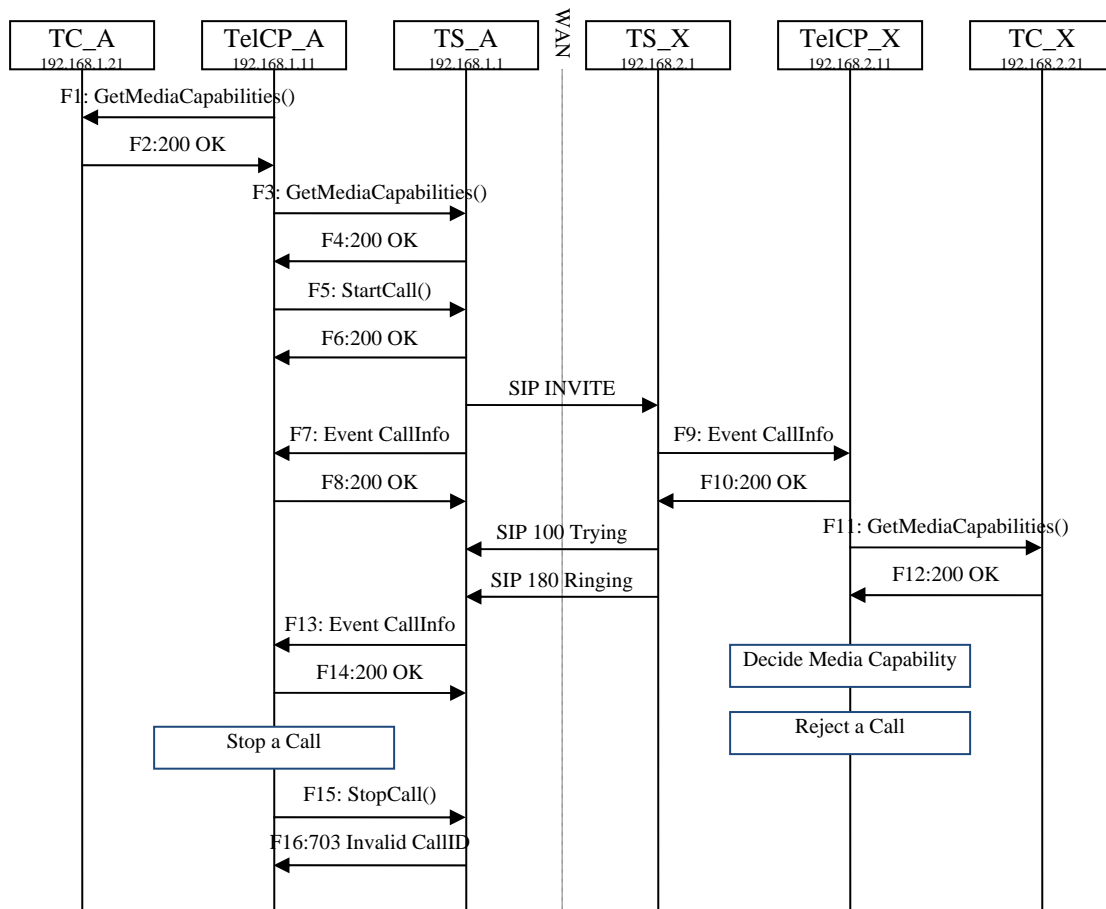
C.15.8   F20

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.16 Cancel an outgoing Call (But the specified CallID does not exist.)

C.16.1   Figure

C.16.2   F1 to F14 are the same as "C.12 Create a Call"

C.16.3   F15

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StopCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <SecretKey>secret101</SecretKey>
   <CallID>wrongcallid</CallID>
  </u:StopCall>
 </s:Body>
</s:Envelope>
```
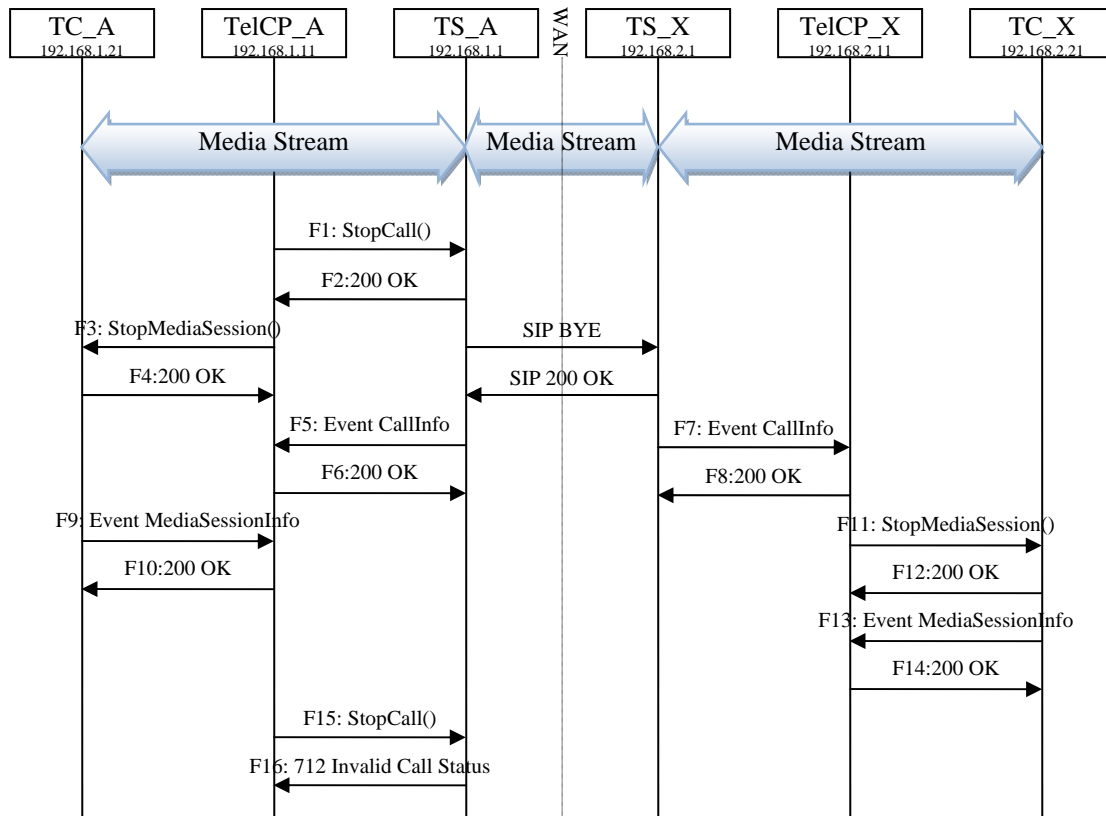
C.16.4   F16

```
HTTP/1.1 500 Internal Server Error
Content-Length: [bytes in body]

<s:Envelope
 xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
 s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <s:Fault>
   <faultcode>s:Client</faultcode>
   <faultstring>UPnPError</faultstring>
   <detail>
    <UPnPError xmlns="urn:schemas-upnp-org:control-1-0">
     <errorCode>703</errorCode>
     <errorDescription>Invalid CallID</errorDescription>
    </UPnPError>
   </detail>
  </s:Fault>
 </s:Body>
</s:Envelope>
```

C.17 Cancel an outgoing Call (But the StopCall() action is invoked at invalid timing.)

C.17.1 Figure

C.17.2 F1 to F14 are the same as "C.13 Terminate a Call"

C.17.3 F15

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StopCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName></TelCPName>
   <SecretKey></SecretKey>
   <CallID>call101</CallID>
  </u:StopCall>
 </s:Body>
</s:Envelope>
```
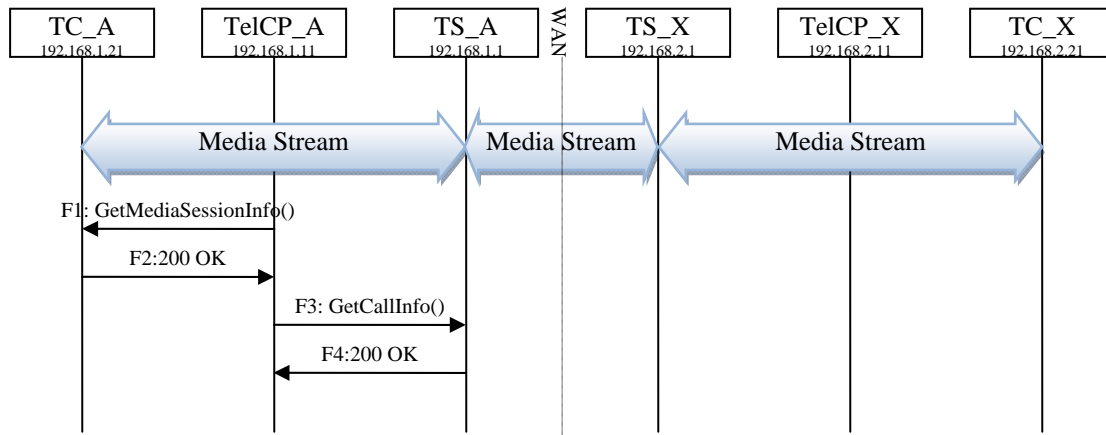
C.17.4   F16

```
HTTP/1.1 500 Internal Server Error
Content-Length: [bytes in body]

<s:Envelope
 xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
 s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <s:Fault>
  <faultcode>s:Client</faultcode>
  <faultstring>UPnPError</faultstring>
  <detail>
   <UPnPError xmlns="urn:schemas-upnp-org:control-1-0">
    <errorCode>712</errorCode>
    <errorDescription>Invalid Call Status</errorDescription>
   </UPnPError>
  </detail>
 </s:Fault>
 </s:Body>
</s:Envelope>
```

C.18 Get MediaSessionInfo and CallInfo during the Call

C.18.1   Figure

C.18.2   F1

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaSessionInfo"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.21:10021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
```

```
 <s:Body>
  <u:GetMediaSessionInfo xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
/>
   <TargetMediaSessionID>media101</TargetMediaSessionID>
  </u:GetMediaSessionInfo>
 </s:Body>
</s:Envelope>
```

C.18.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaSessionInfoResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
   <MediaSessionInfoList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;mss:mediaSessionInfoList xsi:schemaLocation="urn:schemas-upnp-
org:phone:mms
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
    &lt;mediaSessionInfo&gt;
     &it;mediaSessionID&gt;media101&it;/mediaSessionID&gt;
     &it;mediaSessionStatus&gt;Started&it;/mediaSessionStatus&gt;
     &it;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
    &lt;/mediaSessionInfo&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfoList>
  </u:GetMediaSessionInfoResponse>
 </s:Body>
</s:Envelope>
```

C.18.4   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetCallInfo"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
```

```
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetCallInfo xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName></TelCPName>
   <SecretKey></SecretKey>
   <TargetCallID>call101</TargetCallID>
  </u:GetCallInfo>
 </s:Body>
</s:Envelope>
```
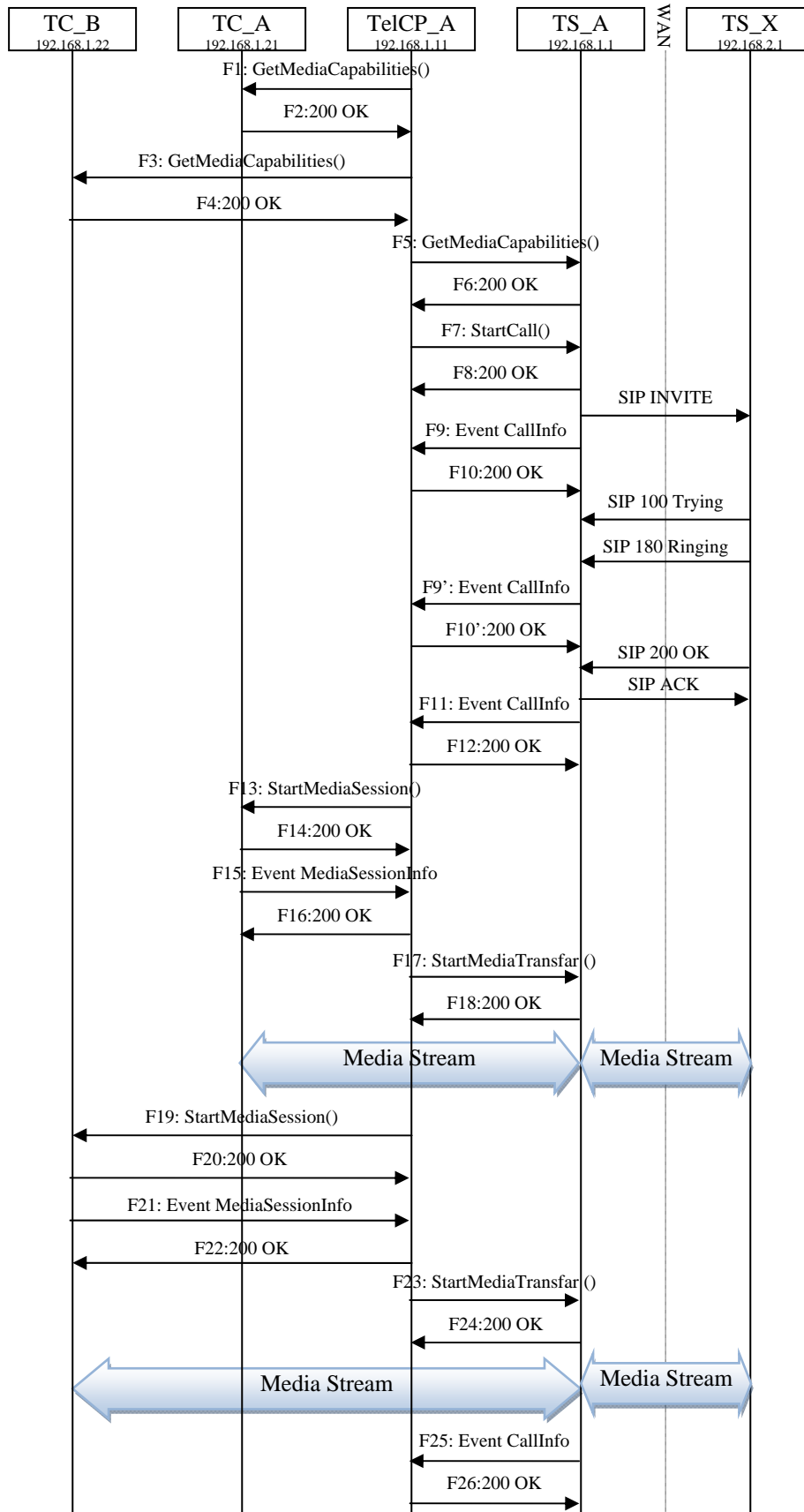
C.18.5　　F4

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetCallInfoResponse xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <callInfoList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:callInfoList
       xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
       http://www.upnp.org/schemas/phone/cams-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:cams"
       xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callInfo&gt;
    &lt;callID&gt;call101&lt;/callID&gt;
    &lt;TelCPNames&gt;&lt;/TelCPNames&gt;
    &lt;callStatus&gt;Talking &lt;/callStatus&gt;
    &lt;priority&gt;"Normal"&lt;/priority&gt;
    &lt;peer&gt;
     &lt;peer:id&gt;0774940201&lt;peer:id&gt;
    &lt;/peer&gt;
    &lt;TCList&gt;
     &lt;TC&gt;
              &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
       &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
     &lt;/TC&gt;
    &lt;/TCList&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/mediaCapability&gt;
    &lt;/callInfo&gt;
```

```
&lt;/cams:callInfoList&gt;</callInfoList>
  </m:GetCallInfoResponse>
 </s:Body>
</s:Envelope>
```

C.19 Create an outgoing Call using multiple TCs (Case 1)

C.19.1   Figure

TC_B
192.168.1.22

TC_A
192.168.1.21

TelCP_A
192.168.1.11

TS_A
192.168.1.1

WAN

TS_X
192.168.2.1

F1: GetMediaCapabilities()

F2:200 OK

F3: GetMediaCapabilities()

F4:200 OK

F5: GetMediaCapabilities()

F6:200 OK

F7: StartCall()

F8:200 OK

SIP INVITE

F9: Event CallInfo

F10:200 OK

SIP 100 Trying

SIP 180 Ringing

F9': Event CallInfo

F10':200 OK

SIP 200 OK

SIP ACK

F11: Event CallInfo

F12:200 OK

F13: StartMediaSession()

F14:200 OK

F15: Event MediaSessionInfo

F16:200 OK

F17: StartMediaTransfar ()

F18:200 OK

Media Stream   Media Stream

F19: StartMediaSession()

F20:200 OK

F21: Event MediaSessionInfo

F22:200 OK

F23: StartMediaTransfar ()

F24:200 OK

Media Stream   Media Stream

F25: Event CallInfo

F26:200 OK

C.19.2   F1

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.21:10021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.19.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaCapabilityInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12021 RTP/AVP 96
c=IN IP4 192.168.1.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120 0086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
```

```
    &lt;/mms:mediaCapabilityInfo&gt;
    </SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.19.4   F3

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.22:10022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
    <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.19.5   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/cams-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
```

```
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
    &lt;/mms:mediaCapabilityInfo&gt;
    </SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.19.6   F5

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service: CallManagement:1">
    <TCMediaCapabilityInfo></TCMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.19.7   F6

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
   <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
```

```
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
 </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.19.8   F7

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <SecretKey>secret101</SecretKey>
   <CalleeID> tel:0774940201</CalleeID>
   <CallPriority>Normal</CallPriority>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
```

```
    <CallMode>Non-Monopolize</CallMode>
   </u:StartCall>
  </s:Body>
</s:Envelope>
```

C.19.9   F8

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1">
   <CallID>call101</CallID>
  </m:StartCallResponse>
 </s:Body>
</s:Envelope>
```

C.19.10 F9

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
    &lt;callID&gt;call101&lt;/callID&gt;
    &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
    &lt;callStatus&gt;Dialing&lt;/callStatus&gt;
    &lt;priority&gt;Normal&lt;/priority&gt;
    &lt;remoteParty&gt;
     &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
    &lt;/remoteParty&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
```

```
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000100000001200086c40fa28a021e0a21
a=framerate:30&lt;/mediaCapability&gt;
 &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.19.11 F10

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.19.12 F9'

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Calling&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
```

```
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000000100000001200086c40fa28a021e0a21
a=framerate:30&lt;/mediaCapability&gt;
 &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.19.13 F10'

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.19.14 F11

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call101&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus&gt;Connected&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
```

```
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30&lt;/mediaCapability&gt;
 &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.19.15 F12

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.19.16 F13

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.21:10021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
      &lt;/mediaCapability&gt;
      &lt;/mms:mediaCapabilityInfo&gt;
      </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.19.17 F14

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]
```

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <MediaSessionID>media101</MediaSessionID>
    <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
       &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;
     </TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
 </s:Body>
</s:Envelope>
```

C.19.18 F15

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10021
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
    &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
    &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
```

```
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
  </e:property>
</e:propertyset>
```

C.19.19 F16

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.19.20 F17

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
    <TelCPName>TV@Living</TelCPName>
    <SecretKey>secret101</SecretKey>
    <TargetCallID>call101</TargetCallID>
    <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:TCList
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;TC&gt;
      &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
      &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
     &lt;/TC&gt;
     &lt;/cams:TCList&gt;</TCList>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
```

```
    &Lt;/mediaCapability &gt;
     &Lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
   </u:StartMediaTransfer>
  </s:Body>
 </s:Envelope>
```

C.19.21 F18

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.19.22 F19

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.22:10022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&Lt;?xml version="1.0" encoding="utf-8"?&gt;
     &Lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &Lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
      &Lt;/mediaCapability&gt;
      &Lt;/mms:mediaCapabilityInfo&gt;
      </TSMediaCapabilityInfo>
```

```
        </u:StartMediaSession>
       </s:Body>
      </s:Envelope>
```

C.19.23 F20

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <MediaSessionID>media102</MediaSessionID>
     <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
    &lt;/mms:mediaCapabilityInfo&gt;</TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
  </s:Body>
 </s:Envelope>
```

C.19.24 F21

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10022
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
```

```
  <e:property>
   <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
   &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
  </e:property>
</e:propertyset>
```

C.19.25 F22

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.19.26 F23

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <SecretKey>secret101</SecretKey>
   <TargetCallID>call101</TargetCallID>
   <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:TCList
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
```

```
                   &lt;/cams:TCList&gt;</TCList>
                   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
                   &lt;cams:mediaCapabilityInfo
                    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
                    http://www.upnp.org/schemas/phone/cams-v1.xsd"
                    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
                    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
                    &lt;mediaCapability format="SDP"&gt;v=0
             o=- 0 0 IN IP4 192.168.1.11
             s=-
             c=IN IP4 192.168.1.11
             t=0 0
             m=video 12022 RTP/AVP 96
             c=IN IP4 192.168.1.22
             b=AS:2500
             a=rtpmap:96 MP4V-ES/90000
             a=fmtp:96 profile-level-
             id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
             a=framerate:30
                     &lt;/mediaCapability&gt;
                    &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
                  </u:StartMediaTransfer>
                 </s:Body>
             </s:Envelope>
```

C.19.27   F24

```
             HTTP/1.1 200 OK
             Content-Length: [bytes in body]
             CONTENT-TYPE: text/xml; charset="utf-8"
             SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
             EXT:

             <?xml version="1.0" encoding="utf-8"?>
             <s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
             s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
              <s:Body>
               <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
             org:service:CallManagement:1" />
              </s:Body>
             </s:Envelope>
```

C.19.28   F25

```
             NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
             HOST: 192.168.1.11:10011
             CONTENT-TYPE: text/xml
             Content-Length: [bytes in body]
             NT: upnp:event
             NTS: upnp:propchange
             SID: uuid:c3580410-1dd1-11b2-8000-10001
             SEQ: [sequence number]
             Connection: Keep-Alive

             <?xml version="1.0" encoding="utf-8"?>
             <e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
```

```
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call101&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus&gt;Talking&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
  &lt;/TCList&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
   &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
</e:propertyset>
```

C.19.29   F26

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.20 Create an outgoing Call using multiple TCs (Case 2)

C.20.1   Figure
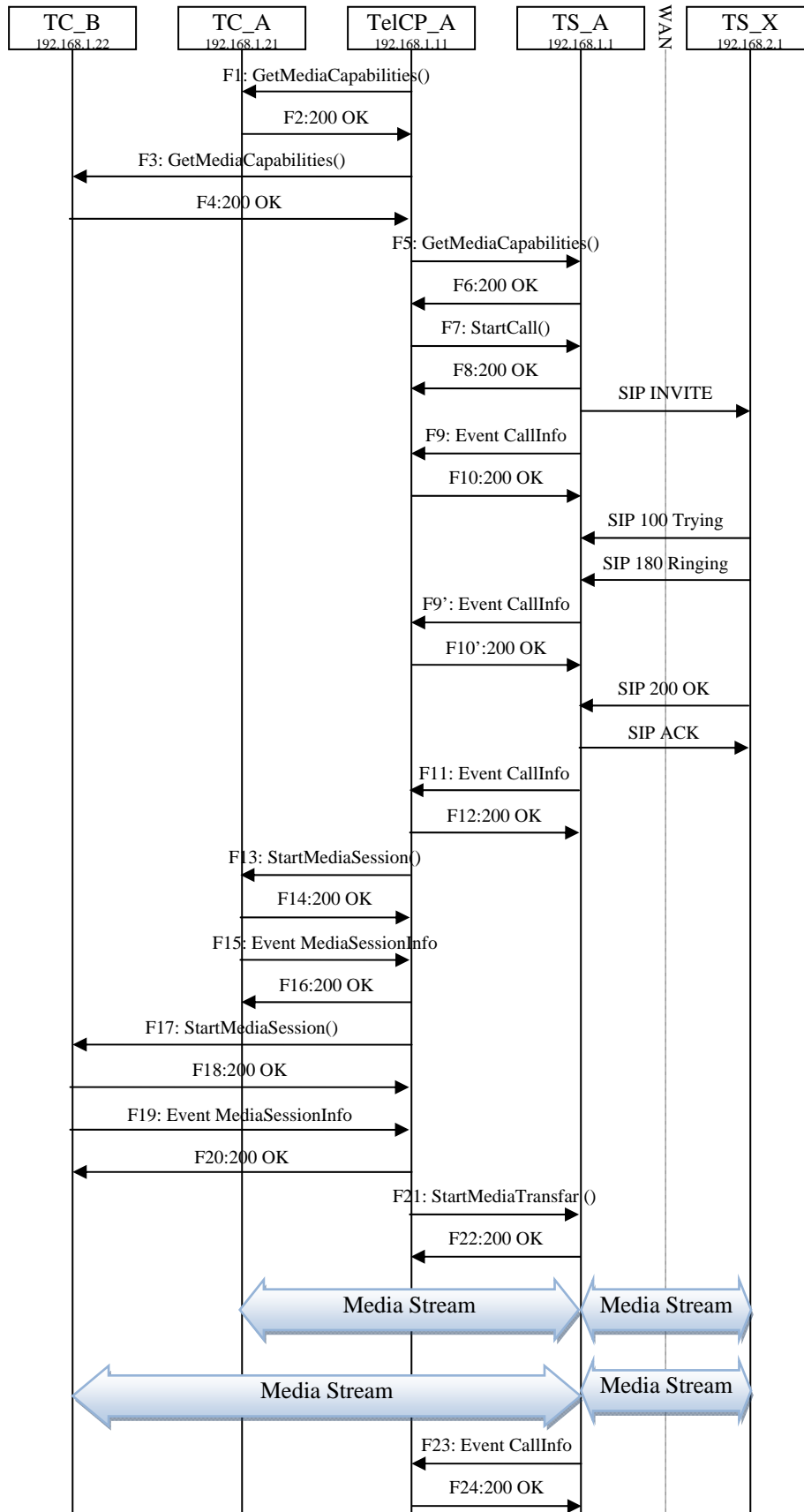
C.20.2   F1 to F16 are the same as "C.19 Create an outgoing Call using multiple TCs (Case 1)"

C.20.3   F17

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.22:10022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
       &lt;/mediaCapability&gt;
       &lt;/mms:mediaCapabilityInfo&gt;
       </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.20.4   F18

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <MediaSessionID>media102</MediaSessionID>
```

```
      <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
       &lt;mms:mediaCapabilityInfo
         xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
         http://www.upnp.org/schemas/phone/mms-v1.xsd"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
         &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
a=framerate:30
         &lt;/mediaCapability&gt;
       &lt;/mms:mediaCapabilityInfo&gt;</TCMediaCapabilityInfo>
     </u:StartMediaSessionResponse>
   </s:Body>
</s:Envelope>
```

C.20.5   F19

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10022
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;mms:mediaSessionInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
     http://www.upnp.org/schemas/phone/mms-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
     &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
     &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
```

```
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
  </e:property>
</e:propertyset>
```

C.20.6   F20

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.20.7   F21

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <SecretKey>secret101</SecretKey>
   <TargetCallID>call101</TargetCallID>
   <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:TCList
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
    &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;/cams:TCList&gt;</TCList>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:mediaCapabilityInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
```

```
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
  </u:StartMediaTransfer>
 </s:Body>
</s:Envelope>
```
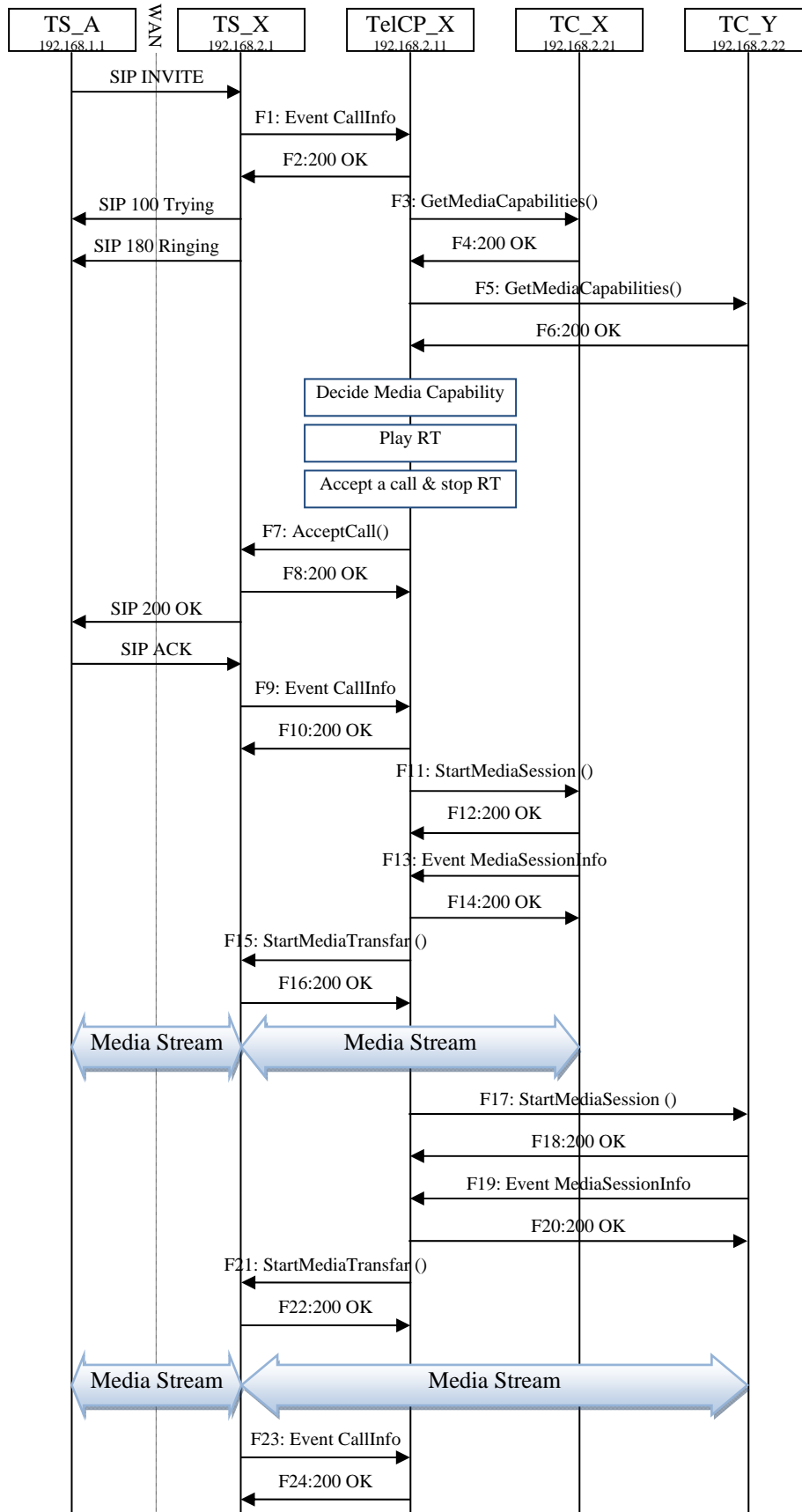
C.20.8　F22

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.20.9　F23

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Talking&lt;/callStatus&gt;
```

```
&lt;priority&gt;Normal&lt;/priority&gt;
&lt;remoteParty&gt;
 &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
&lt;/remoteParty&gt;
&lt;TCList&gt;
 &lt;TC&gt;
   &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
   &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
 &lt;/TC&gt;
 &lt;TC&gt;
   &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
   &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
 &lt;/TC&gt;
&lt;/TCList&gt;
&lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
   &lt;/mediaCapability&gt;
 &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.20.10   F24

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.21 Accept an incoming Call using multiple TCs (Case 1)

C.21.1   Figure

TS_A 192.168.1.1	WAN	TS_X 192.168.2.1	TelCP_X 192.168.2.11	TC_X 192.168.2.21	TC_Y 192.168.2.22

SIP INVITE

F1: Event CallInfo

F2:200 OK

SIP 100 Trying

F3: GetMediaCapabilities()

SIP 180 Ringing

F4:200 OK

F5: GetMediaCapabilities()

F6:200 OK

Decide Media Capability

Play RT

Accept a call & stop RT

F7: AcceptCall()

F8:200 OK

SIP 200 OK

SIP ACK

F9: Event CallInfo

F10:200 OK

F11: StartMediaSession ()

F12:200 OK

F13: Event MediaSessionInfo

F14:200 OK

F15: StartMediaTransfar ()

F16:200 OK

Media Stream   Media Stream

F17: StartMediaSession ()

F18:200 OK

F19: Event MediaSessionInfo

F20:200 OK

F21: StartMediaTransfar ()

F22:200 OK

Media Stream   Media Stream

F23: Event CallInfo

F24:200 OK

C.21.2   F1

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
    &lt;callID&gt;call201&lt;/callID&gt;
    &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
    &lt;callStatus&gt;Ringing&lt;/callStatus&gt;
    &lt;priority&gt;Normal&lt;/priority&gt;
    &lt;remoteParty&gt;
     &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
    &lt;/remoteParty&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
a=framerate:30
   &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.21.3   F2

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.21.4   F3

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.21:20021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.21.5   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22021 RTP/AVP 96
c=IN IP4 192.168.2.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
```

</mms:mediaCapabilityInfo></SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>

C.21.6 F5

POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.22:20022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
 </u:GetMediaCapabilities>
</s:Envelope>

C.21.7 F6

HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <SupportedMediaCapabilityInfo><?xml version="1.0" encoding="utf-8"?>
     <mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:mms">
      <mediaCapability format="SDP">v=0
o=- 0 0 IN IP4 192.168.2.22
s=-
c=IN IP4 192.168.2.22
t=0 0
m=audio 21022 RTP/AVP 0
c=IN IP4 192.168.2.22
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000

```
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability &gt;
   &lt;/mms:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
 </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.21.8   F7

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#AcceptCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]


POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#AcceptCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]


<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:AcceptCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>phone@Bedroom</TelCPName>
   <SecretKey>secret201</SecretKey>
   <TargetCallID>call201</TargetCallID>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;
   </MediaCapabilityInfo>
```

```
  <CallMode>Non-Monopolize</CallMode>
 </u:AcceptCall>
 </s:Body>
</s:Envelope>
```

C.21.9   F8

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <m:AcceptCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1"
/>
 </s:Body>
</s:Envelope>
```

C.21.10 F9

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call201&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Connected&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
```

```
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
 a=framerate:30
   &lt;/mediaCapability&gt;
   &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
</e:propertyset>
```

C.21.11 F10

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.21.12 F11

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.21:20021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
      &lt;/mediaCapability&gt;
      &lt;/mms:mediaCapabilityInfo&gt;
      </TSMediaCapabilityInfo>
   </u:StartMediaSession>
  </s:Body>
</s:Envelope>
```

C.21.13 F12

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <MediaSessionID>media201</MediaSessionID>
    <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;</TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
 </s:Body>
</s:Envelope>
```

C.21.14 F13

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20021
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
     http://www.upnp.org/schemas/phone/mms-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
```

```
&lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
&lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
&lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
   &lt;/mediaCapability&gt;
  &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
 </e:property>
</e:propertyset>
```

C.21.15 F14

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.21.16 F15

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>phone @Bedroom</TelCPName>
   <SecretKey>secret201</SecretKey>
   <TargetCallID>call201</TargetCallID>
   <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:TCList
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;/cams:TCList&gt;</TCList>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:mediaCapabilityInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
```

```
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
  </u:StartMediaTransfer>
 </s:Body>
</s:Envelope>
```

C.21.17 F16

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.21.18 F17

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.22:20022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
```

```
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
    &lt;/mms:mediaCapabilityInfo&gt;
    </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.21.19 F18

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <MediaSessionID>media202</MediaSessionID>
     <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
        http://www.upnp.org/schemas/phone/mms-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.22
s=-
c=IN IP4 192.168.2.22
t=0 0
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
    &lt;/mms:mediaCapabilityInfo&gt;</TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
 </s:Body>
</s:Envelope>
```

C.21.20 F19

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
```

SID: uuid:c3580410-1dd1-11b2-8000-20022
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <MediaSessionInfo><?xml version="1.0" encoding="utf-8"?>
   <mms:mediaSessionInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mms="urn:schemas-upnp-org:phone:mms">
   <mediaSessionID>*media202*</mediaSessionID>
   <mediaSessionStatus>*Started*</mediaSessionStatus>
   <mediaCapability format="SDP">v=0
o=- 0 0 IN IP4 192.168.2.22
s=-
c=IN IP4 192.168.2.22
t=0 0
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
     </mediaCapability>
   </mms:mediaSessionInfo></MediaSessionInfo>
 </e:property>
</e:propertyset>

C.21.21 F20

HTTP/1.1 200 OK
Content-Length: 0

C.21.22 F21

POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
    <TelCPName>*phone @Bedroom*</TelCPName>
    <SecretKey>*secret201*</SecretKey>
    <TargetCallID>*call201*</TargetCallID>
    <TCList><?xml version="1.0" encoding="utf-8"?>
    <cams:TCList
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams

      http://www.upnp.org/schemas/phone/cams-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:cams">
      <TC>
       <UDN>uuid:*97ef6efa-ac89-4ea2-0001-udn202*</UDN>
       <mediaSessionID>*media202*</mediaSessionID>
      </TC>
      </cams:TCList></TCList>
     <MediaCapabilityInfo><?xml version="1.0" encoding="utf-8"?>
     <cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams">
     <mediaCapability format="SDP">v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120008 6c40fa28a021e0a21
a=framerate:30
      </mediaCapability>
     </cams:mediaCapabilityInfo></MediaCapabilityInfo>
   </u:StartMediaTransfer>
   </s:Body>
  </s:Envelope>

C.21.23 F22

HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>

C.21.24 F23

NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange

SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

```
<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call201&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus&gt;Talking&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn202&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media202&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
  &lt;/TCList&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
a=framerate:30
  &lt;/mediaCapability&gt;
 &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.21.25 F24

HTTP/1.1 200 OK
Content-Length: 0

C.22 Accept an incoming Call using multiple TCs (Case 2)

C.22.1   Figure
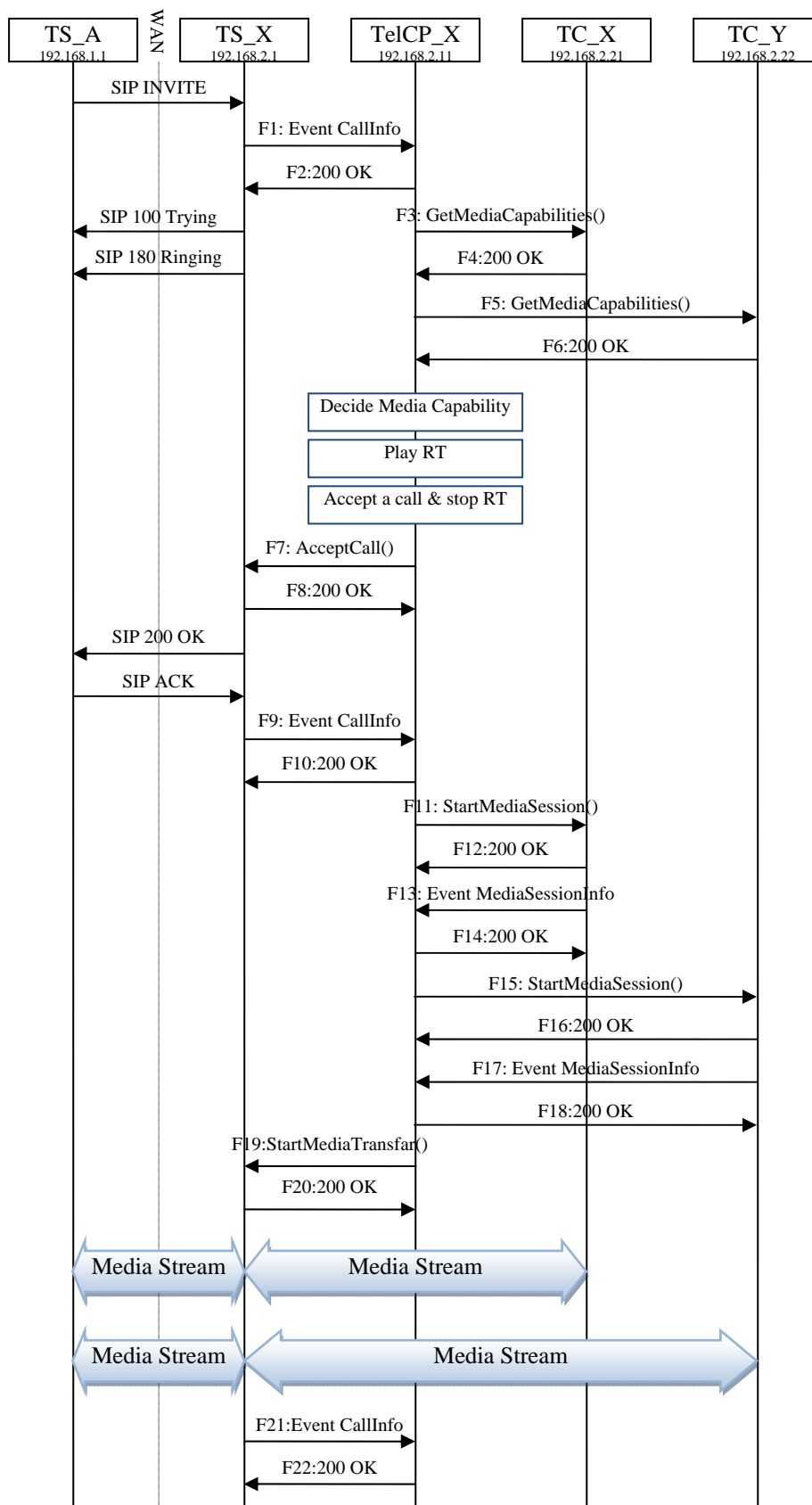
C.22.2   F1 to F14 are the same as "C.21 Accept an incoming Call using multiple TCs (Case 1)"

C.22.3   F15

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.22:20022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120086c40fa28a021e0a21
a=framerate:30
       &lt;/mediaCapability&gt;
       &lt;/mms:mediaCapabilityInfo&gt;
       </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.22.4   F16

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <MediaSessionID>media202</MediaSessionID>
```

```
<TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;mms:mediaCapabilityInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.22
s=-
c=IN IP4 192.168.2.22
t=0 0
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120008 6c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
    &lt;/mms:mediaCapabilityInfo&gt;</TCMediaCapabilityInfo>
  </u:StartMediaSessionResponse>
 </s:Body>
</s:Envelope>
```

C.22.5   F17

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20022
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
    &lt;mediaSessionID&gt;media202&lt;/mediaSessionID&gt;
    &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.22
s=-
c=IN IP4 192.168.2.22
t=0 0
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
```

```
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
a=framerate:30
   &lt;/mediaCapability&gt;
  &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
 </e:property>
</e:propertyset>
```

C.22.6   F18

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.22.7   F19

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>phone @Bedroom</TelCPName>
   <SecretKey>secret201</SecretKey>
   <TargetCallID>call201</TargetCallID>
   <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:TCList
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn202&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media202&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;/cams:TCList&gt;</TCList>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:mediaCapabilityInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
```

```
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
  </u:StartMediaTransfer>
 </s:Body>
</s:Envelope>
```

C.22.8   F20

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.22.9   F21

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call201&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Talking&lt;/callStatus&gt;
```

<priority>Normal</priority>
<remoteParty>
<peer:id>*0355550101*</peer:id>
</remoteParty>
<TCList>
<TC>
<UDN>uuid:*97ef6efa-ac89-4ea2-0001-udn201*</UDN>
<mediaSessionID>*media201*</mediaSessionID>
</TC>
<TC>
<UDN>uuid:*97ef6efa-ac89-4ea2-0001-udn202*</UDN>
<mediaSessionID>*media202*</mediaSessionID>
</TC>
</TCList>
<mediaCapability format="SDP">v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
</mediaCapability>
</cams:callInfo></CallInfo>
</e:property>
</e:propertyset>

C.22.10 F22

HTTP/1.1 200 OK
Content-Length: 0
</s:Envelope>

C.23 Add TC during a Call (Create a modification request)

C.23.1 Figure
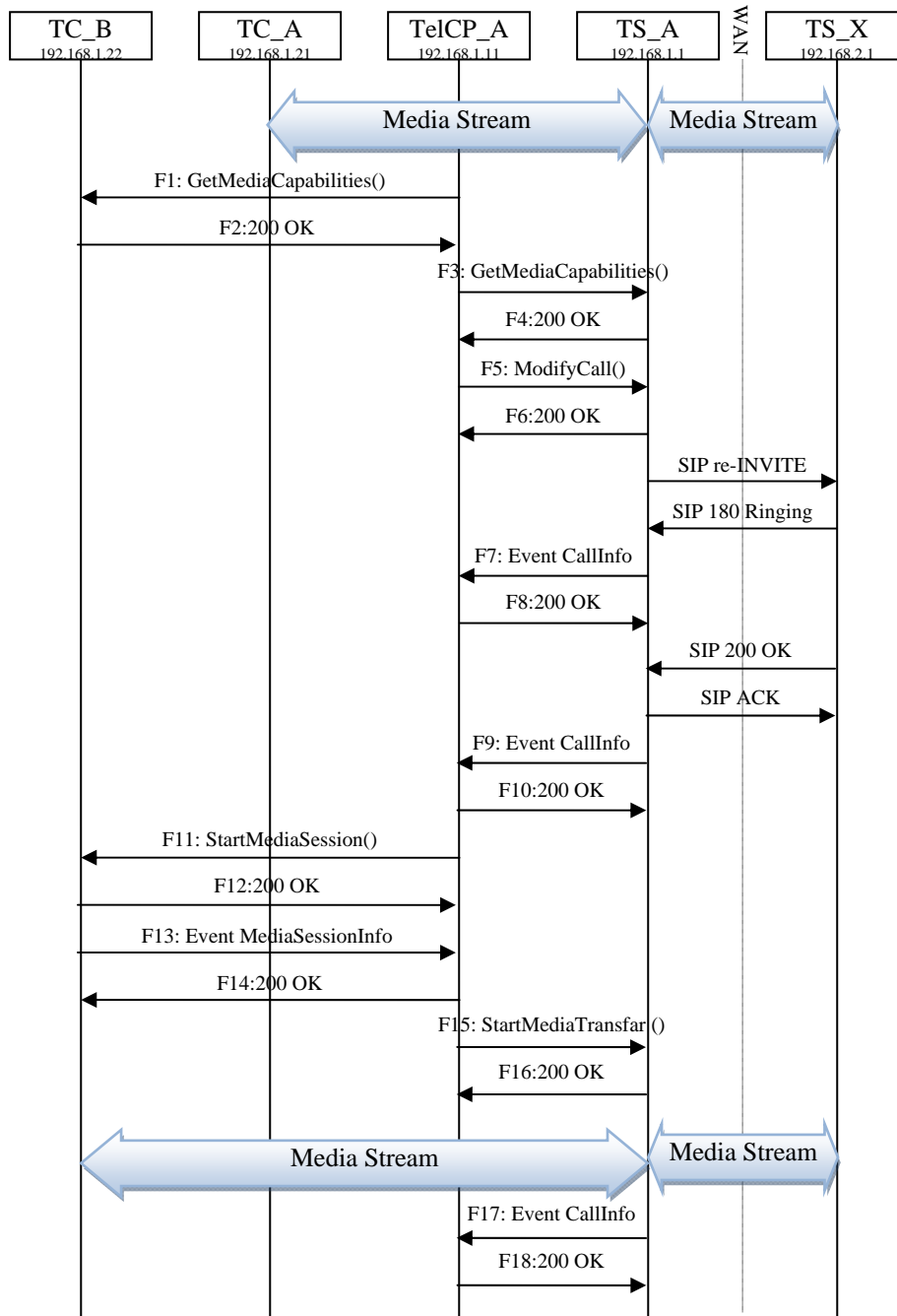
C.23.2 F1

POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"

```
HOST: 192.168.1.22:10022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.23.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120086c40fa28a021e0a21
a=framerate:30
&lt;/mediaCapability&gt;
&lt;/mms:mediaCapabilityInfo&gt;
    </SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.23.4   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service: CallManagement:1">
   <TCMediaCapabilityInfo></TCMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.23.5   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
   <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
```

```
  </s:Body>
 </s:Envelope>
```

C.23.6   F5

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#ModifyCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:ModifyCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <SecretKey>secret101</SecretKey>
   <TargetCallID>call101</TargetCallID>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;
    </MediaCapabilityInfo>
  </u:ModifyCall>
 </s:Body>
</s:Envelope>
```

C.23.7   F6

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:
```

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:ModifyCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.23.8   F7

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;SendingModifyRequest&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
```

```
    a=fmtp:96 profile-level-
    id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
    a=framerate:30
        &lt;/mediaCapability&gt;
      &lt;/cams:callInfo&gt;
    </CallInfo>
   </e:property>
</e:propertyset>
```

C.23.9   F8

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.23.10 F9

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Modified&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
```

```
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;
 </CallInfo>
</e:property>
</e:propertyset>
```

C.23.11 F10

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.23.12 F11

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.22:10022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;
     </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.23.13 F12

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <MediaSessionID>media102</MediaSessionID>
    <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
    &lt;/mms:mediaCapabilityInfo&gt;
    </TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
 </s:Body>
</s:Envelope>
```

C.23.14 F13

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10022
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
```

```
            xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
            http://www.upnp.org/schemas/phone/mms-v1.xsd"
            xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
            xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
            &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
            &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
            &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000001000000001200086c40fa28a021e0a21
a=framerate:30
            &lt;/mediaCapability&gt;
          &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
        </e:property>
      </e:propertyset>
```

C.23.15   F14

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.23.16   F15

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
     <TelCPName>TV@Living</TelCPName>
     <SecretKey>secret101</SecretKey>
     <TargetCallID>call101</TargetCallID>
     <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:TCList
      xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
      http://www.upnp.org/schemas/phone/cams-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;TC&gt;
      &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
      &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
     &lt;/TC&gt;
     &lt;TC&gt;
      &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
      &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
```

```
    &lt;/TC&gt;
    &lt;/cams:TCList&gt;</TCList>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
   </u:StartMediaTransfer>
  </s:Body>
 </s:Envelope>
```
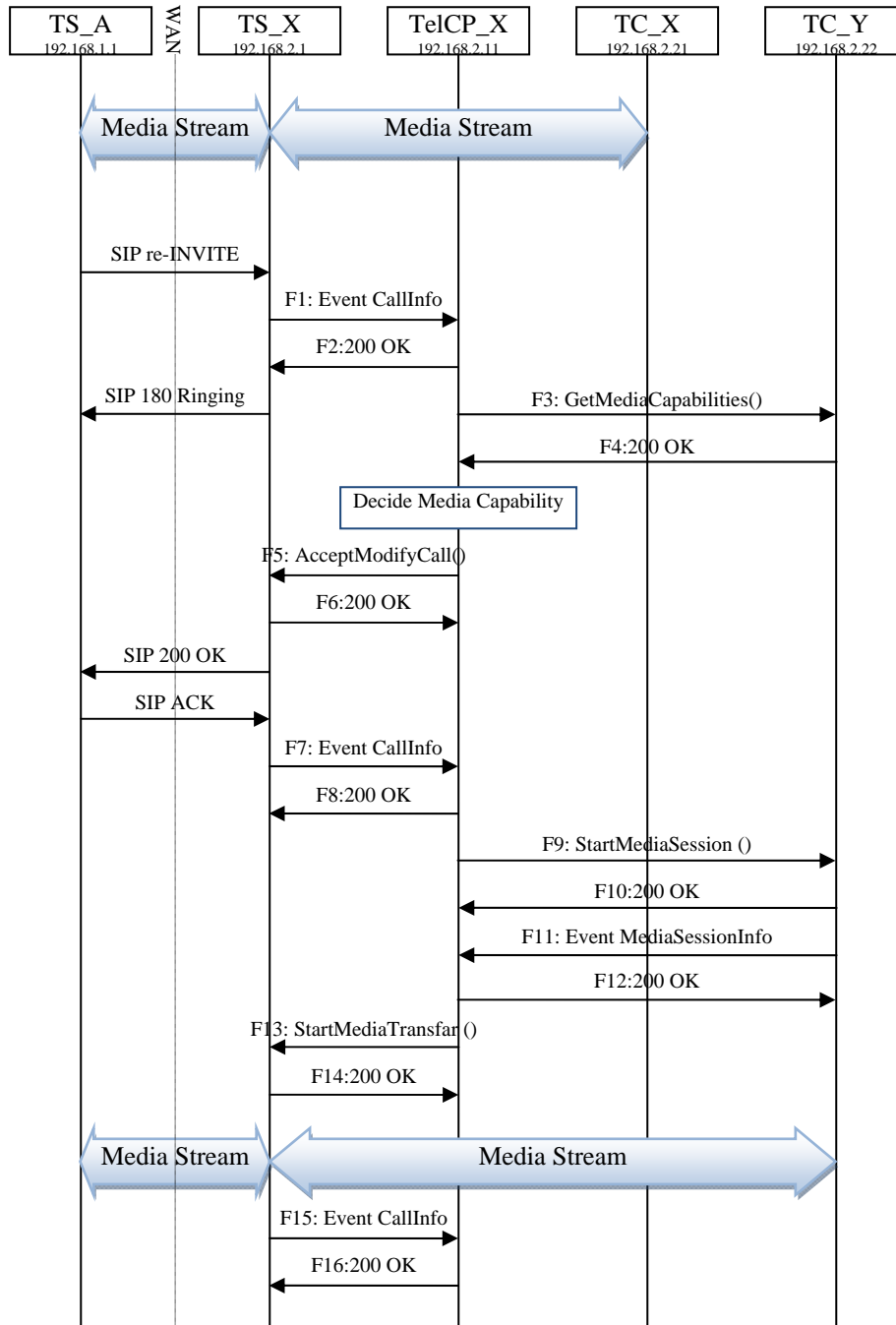
C.23.17 F16

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.23.18 F17

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
```

Connection: Keep-Alive

```
<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Talking&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120 0086c40fa28a021e0a21
a=framerate:30
   &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.23.19 F18

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.24 Add TC during a Call (Accept a modification request)

C.24.1   Figure

C.24.2   F1

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
```

```
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call201&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus&gt;ReceivingModifyRequest&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
  &lt;/TCList&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
  &lt;/mediaCapability&gt;
 &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.24.3   F2

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.24.4   F3

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.22:20022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
 </u:GetMediaCapabilities>
</s:Envelope>
```

C.24.5   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.22
s=-
c=IN IP4 192.168.2.22
t=0 0
m=audio 21022 RTP/AVP 0
c=IN IP4 192.168.2.22
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
```

```
  </s:Body>
 </s:Envelope>
```

C.24.6   F5

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#AcceptModifyCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:AcceptModifyCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>phone @Bedroom</TelCPName>
   <SecretKey>secret201</SecretKey>
   <TargetCallID>call201</TargetCallID>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;
    </MediaCapabilityInfo>
  </u:AcceptModifyCall>
 </s:Body>
</s:Envelope>
```

C.24.7   F6

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
```

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:AcceptModifyCallResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.24.8   F7

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call201&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus&gt;Modified&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
  &lt;/TCList&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
```

```
  a=fmtp:96 profile-level-
  id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
   a=framerate:30
     &lt;/mediaCapability&gt;
     &lt;/cams:callInfo&gt;</CallInfo>
   </e:property>
 </e:propertyset>
```

C.24.9   F8

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.24.10   F9

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.22:20022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
      &lt;/mms:mediaCapabilityInfo&gt;
      </TSMediaCapabilityInfo>
   </u:StartMediaSession>
  </s:Body>
 </s:Envelope>
```

C.24.11   F10

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
```

Content-Length: [bytes in body]

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <MediaSessionID>media202</MediaSessionID>
     <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
        http://www.upnp.org/schemas/phone/mms-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.22
s=-
c=IN IP4 192.168.2.22
t=0 0
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
    &lt;/mms:mediaCapabilityInfo&gt;</TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
 </s:Body>
</s:Envelope>
```

C.24.12 F11

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20022
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
    &lt;mediaSessionID&gt;media202&lt;/mediaSessionID&gt;
    &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
```

```
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.22
s=-
c=IN IP4 192.168.2.22
t=0 0
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
  </e:property>
</e:propertyset>
```

C.24.13 F12

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.24.14 F13

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>phone@Bedroom</TelCPName>
   <SecretKey>secret201</SecretKey>
   <TargetCallID>call201</TargetCallID>
   <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:TCList
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn202&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media202&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;/cams:TCList&gt;</TCList>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:mediaCapabilityInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
```

```
              xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
              xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
              &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22022RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
        &lt;/mediaCapability&gt;
      &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
      </u:StartMediaTransfer>
    </s:Body>
  </s:Envelope>
```
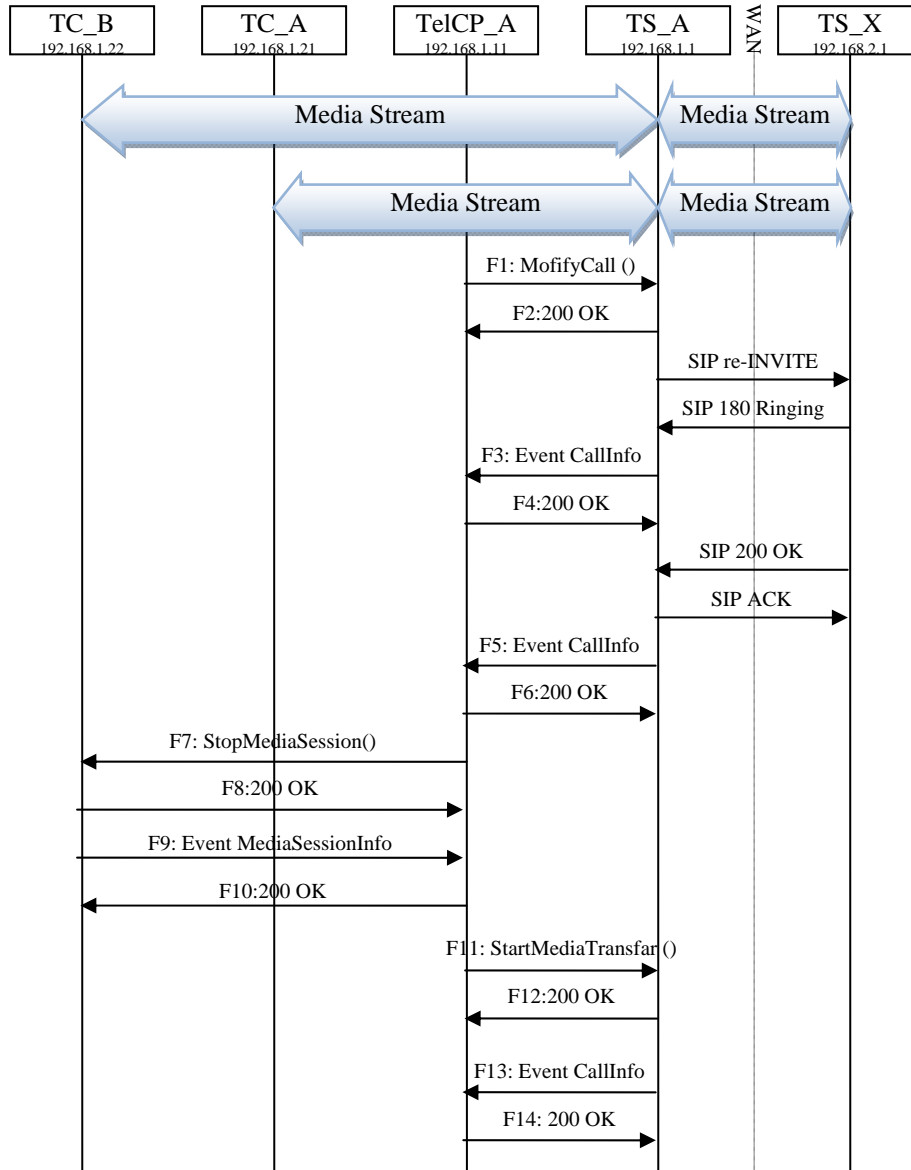
C.24.15 F14

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
  <s:Body>
    <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
  </s:Body>
</s:Envelope>
```

C.24.16 F15

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
  <e:property>
    <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
```

```
&lt;cams:callInfo
 xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
 http://www.upnp.org/schemas/phone/cams-v1.xsd"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:cams="urn:schemas-upnp-org:phone:cams"
 xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
 &lt;callID&gt;call201&lt;/callID&gt;
 &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
 &lt;callStatus&gt;Talking&lt;/callStatus&gt;
 &lt;priority&gt;Normal&lt;/priority&gt;
 &lt;remoteParty&gt;
  &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
 &lt;/remoteParty&gt;
 &lt;TCList&gt;
  &lt;TC&gt;
   &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
   &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
  &lt;/TC&gt;
  &lt;TC&gt;
   &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn202&lt;/UDN&gt;
   &lt;mediaSessionID&gt;media202&lt;/mediaSessionID&gt;
  &lt;/TC&gt;
 &lt;/TCList&gt;
 &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
  &lt;/mediaCapability&gt;
 &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.24.17 F16

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.25   Remove TC during a Call (Create a modification request)

C.25.1   Figure

C.25.2   F1

POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#ModifyCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>

```
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:ModifyCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <SecretKey>secret101</SecretKey>
   <TargetCallID>call101</TargetCallID>
     <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
      http://www.upnp.org/schemas/phone/cams-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
      &lt;/mediaCapability &gt;
     &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
  </u:ModifyCall>
 </s:Body>
</s:Envelope>
```

C.25.3   F2

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:ModifyCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.25.4   F3

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
```

```
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call101&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus&gt;SendingModifyRequest&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
  &lt;/TCList&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
a=framerate:30&lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
</e:propertyset>
```

C.25.5   F4

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.25.6   F5

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
```

NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <CallInfo><?xml version="1.0" encoding="utf-8"?>
    <cams:callInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"
     xmlns:peer="urn:schemas-upnp-org:phone:peer">
     <callID>*call101*</callID>
     <targetNames type="TelCPName">*</targetNames>
     <callStatus>*Modified*</callStatus>
     <priority>Normal</priority>
     <remoteParty>
      <peer:id>*0774940201*</peer:id>
     </remoteParty>
     <TCList>
      <TC>
        <UDN>uuid:*97ef6efa-ac89-4ea2-0001-udn101*</UDN>
        <mediaSessionID>*media101*</mediaSessionID>
      </TC>
     </TCList>
     <mediaCapability format="SDP">v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20</mediaCapability>
    </cams:callInfo></CallInfo>
  </e:property>
</e:propertyset>

C.25.7   F6

HTTP/1.1 200 OK
Content-Length: 0

C.25.8   F7

POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StopMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.22:10022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>

```
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopMediaSession xmlns:u="urn:schemas-upnp-org:service: MediaManagement:1">
   <TargetMediaSessionID>media102</TargetMediaSessionID>
  </u:StopMediaSession>
 </s:Body>
</s:Envelope>
```

C.25.9   F8

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1" />
 </s:Body>
</s:Envelope>
```

C.25.10 F9

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10022
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;mms:mediaSessionInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
   http://www.upnp.org/schemas/phone/mms-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
   &lt;mediaSessionStatus&gt;Stopped&lt;/mediaSessionStatus&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
```

```
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:3
    &lt;/mediaCapability&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
  </e:property>
</e:propertyset>
```

C.25.11 F10

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.25.12 F11

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
    <TelCPName>TV@Living</TelCPName>
    <SecretKey>secret101</SecretKey>
    <TargetCallID>call101</TargetCallID>
    <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:TCList
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
    &lt;/cams:TCList&gt;</TCList>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
```

```
        &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
      </u:StartMediaTransfer>
     </s:Body>
    </s:Envelope>
```

C.25.13 F12

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.25.14 F13

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
  xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
  http://www.upnp.org/schemas/phone/cams-v1.xsd"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:cams="urn:schemas-upnp-org:phone:cams"
  xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call101&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus&gt;Talking&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
  &lt;/TCList&gt;
```
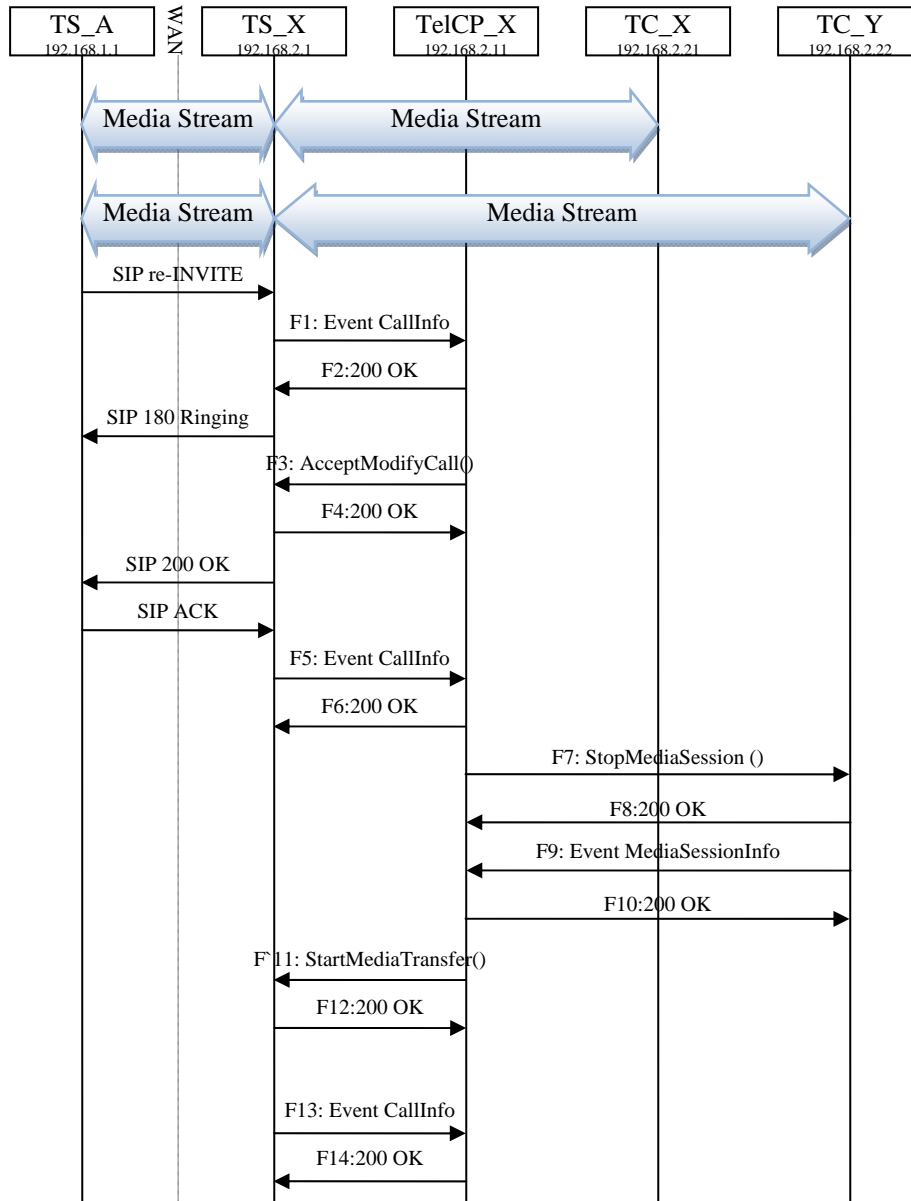
```
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
</e:propertyset>
```

C.25.15 F14

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.26 Remove TC during a Call (Accept a modification request)

C.26.1 Figure

C.26.2 F1

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive
```

```
<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call201&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;ReceivingModifyRequest&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn202&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media202&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
   &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.26.3   F2

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.26.4   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#AcceptModifyCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
```

```
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:AcceptModifyCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>phone@Bedroom</TelCPName>
   <SecretKey>secret201</SecretKey>
   <TargetCallID>call201</TargetCallID>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/mediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;
   </MediaCapabilityInfo>
  </u:AcceptModifyCall>
 </s:Body>
</s:Envelope>
```

C.26.5   F4

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:AcceptModifyCallResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.26.6   F5

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive
```

```
<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call201&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;phone@Bedroom&lt;/targetNames&gt;
  &lt;callStatus&gt;Modified&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn202&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media202&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
  &lt;/TCList&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
  &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.26.7   F6

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.26.8   F7

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StopMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.22:20022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
```

```
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopMediaSession xmlns:u="urn:schemas-upnp-org:service: MediaManagement:1">
   <TargetMediaSessionID>media202</TargetMediaSessionID>
  </u:StopMediaSession>
 </s:Body>
</s:Envelope>
```

C.26.9   F8

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1" />
 </s:Body>
</s:Envelope>
```

C.26.10 F9

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20022
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;mms:mediaSessionInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
   http://www.upnp.org/schemas/phone/mms-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaSessionID&gt;media202&lt;/mediaSessionID&gt;
   &lt;mediaSessionStatus&gt;Stopped&lt;/mediaSessionStatus&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.22
s=-
c=IN IP4 192.168.2.22
t=0 0
m=video 22022 RTP/AVP 96
c=IN IP4 192.168.2.22
b=AS:2500
```

```
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:3
    &lt;/mediaCapability&gt;
  &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
 </e:property>
</e:propertyset>
```

C.26.11 F10

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.26.12 F11

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>phone@Bedroom</TelCPName>
   <SecretKey>secret201</SecretKey>
   <TargetCallID>call201</TargetCallID>
   <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:TCList
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
    &lt;/cams:TCList&gt;</TCList>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:mediaCapabilityInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
```

```
    &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
   </u:StartMediaTransfer>
  </s:Body>
</s:Envelope>
```

C.26.13 F12

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.26.14 F13

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call201&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;phone@Bedroom&lt;/targetNames&gt;
   &lt;callStatus&gt;Talking&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
```
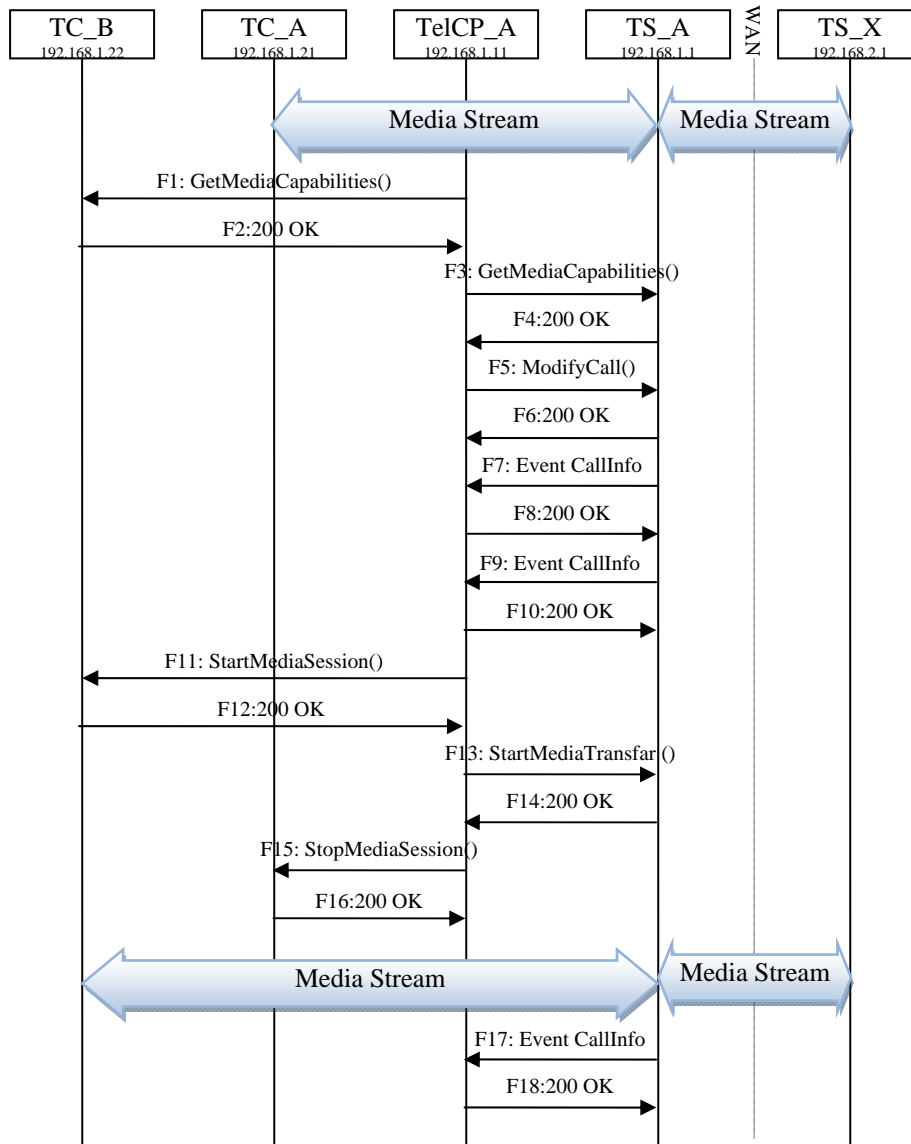
```
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
</e:propertyset>
```

C.26.15   F14

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.27 Change TC during a Call

C.27.1   Figure

C.27.2   F1

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.22:10022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
```

```
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.27.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;
     </SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.27.4   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
```

Content-Length: [bytes in body]

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service: CallManagement:1">
   <TCMediaCapabilityInfo></TCMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.27.5   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.27.6   F5

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
```

```
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#ModifyCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:ModifyCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <SecretKey>secret101</SecretKey>
   <TargetCallID>call101</TargetCallID>
     <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
      http://www.upnp.org/schemas/phone/cams-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/mediaCapability&gt;
     &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
  </u:ModifyCall>
 </s:Body>
</s:Envelope>
```

C.27.7   F6

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:ModifyCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.27.8   F7

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
```

NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

```
<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
    &lt;callID&gt;call101&lt;/callID&gt;
    &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
    &lt;callStatus&gt;SendingModifyRequest&lt;/callStatus&gt;
    &lt;priority&gt;Normal&lt;/priority&gt;
    &lt;remoteParty&gt;
     &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
    &lt;/remoteParty&gt;
    &lt;TCList&gt;
     &lt;TC&gt;
       &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
       &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
     &lt;/TC&gt;
    &lt;/TCList&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
&lt;/mediaCapability&gt;
   &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
</e:propertyset>
```

C.27.9   F8

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.27.10 F9

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
```

Connection: Keep-Alive

```
<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call101&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus&gt;Modified&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
  &lt;/TCList&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
  &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.27.11 F10

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.27.12 F11

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.22:10022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
```

```
    <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
        http://www.upnp.org/schemas/phone/mms-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
        &lt;/mediaCapability&gt;
        &lt;/mms:mediaCapabilityInfo&gt;
        </TSMediaCapabilityInfo>
   </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.27.13 F12

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <MediaSessionID>media102</MediaSessionID>
     <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
        http://www.upnp.org/schemas/phone/mms-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
        &lt;/mediaCapability&gt;
        &lt;/mms:mediaCapabilityInfo&gt;
      </TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
```

```
    </s:Body>
    </s:Envelope>
```

C.27.14 F13

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10022
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
   &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
 </e:property>
</e:propertyset>
```

C.27.15 F14

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.27.16 F15

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
```

```
      <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
       <TelCPName>TV@Living</TelCPName>
       <SecretKey>secret101</SecretKey>
       <TargetCallID>call101</TargetCallID>
       <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
       &lt;cams:TCList
        xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
        http://www.upnp.org/schemas/phone/cams-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
        &lt;TC&gt;
         &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
         &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
        &lt;/TC&gt;
        &lt;/cams:TCList&gt;</TCList>
       <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
       &lt;cams:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
        http://www.upnp.org/schemas/phone/cams-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
         &lt;/mediaCapability&gt;
        &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
       </u:StartMediaTransfer>
      </s:Body>
     </s:Envelope>
```

C.27.17 F16

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.27.18 F17

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
```

```
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Talking&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
      &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
      &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
   &lt;/mediaCapability&gt;
   &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.27.19 F18

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.27.20 F19

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
```

```
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10021
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
    &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
    &lt;mediaSessionStatus&gt;Stopped&lt;/mediaSessionStatus&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/mediaCapability&gt;
    &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
 </e:property>
</e:propertyset>
```
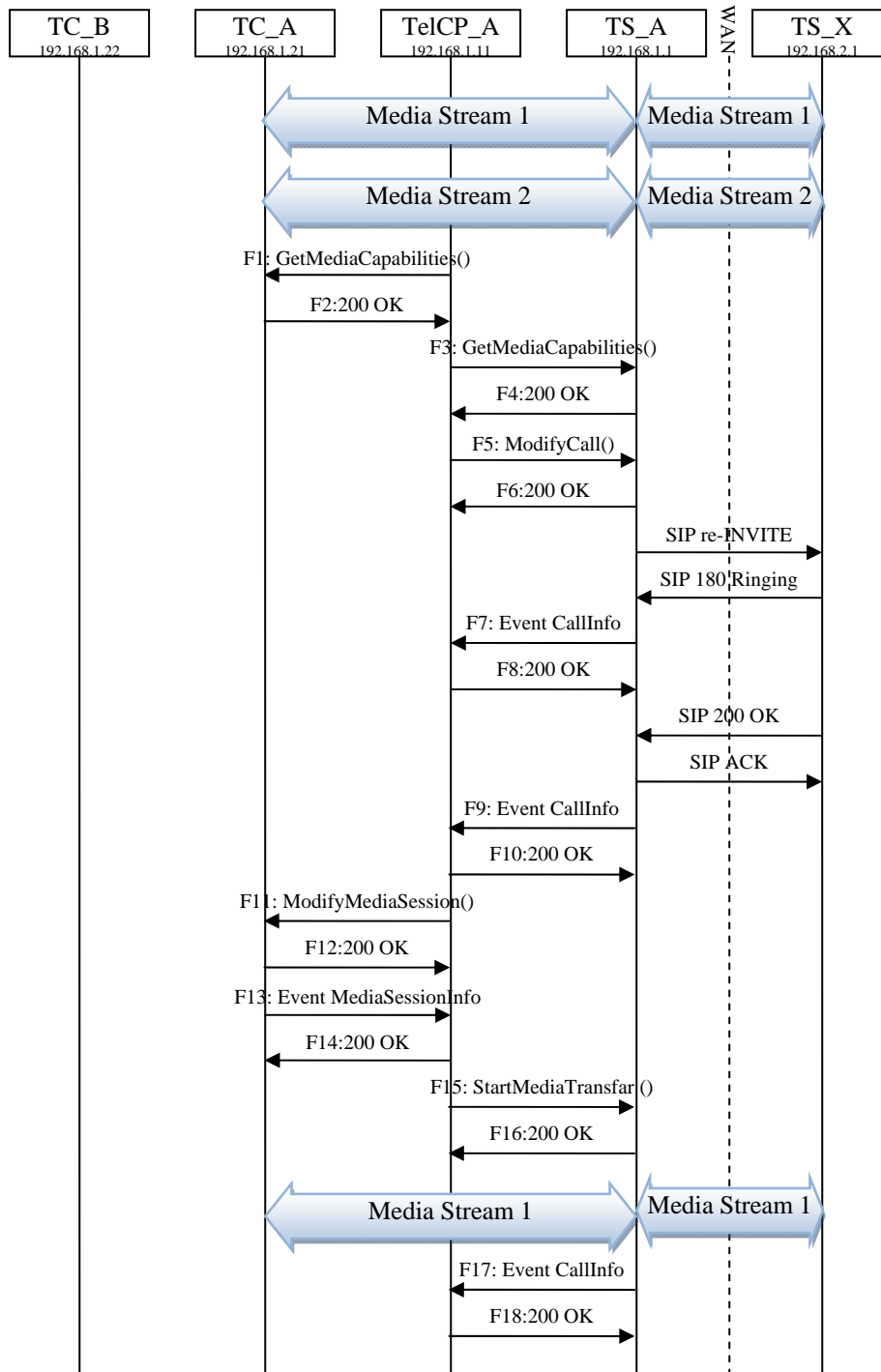
C.27.21 F20

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.28 Modify Media Session during a Call

C.28.1   Figure

C.28.2   F1

POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1

```
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.22:10022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.28.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
      http://www.upnp.org/schemas/phone/mms-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;
     </SupportedMediaCapabilityInfo>
```

```
    </u:GetMediaCapabilitiesResponse>
   </s:Body>
  </s:Envelope>
```

C.28.4   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service: CallManagement:1">
    <TCMediaCapabilityInfo></TCMediaCapabilityInfo>
   </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.28.5   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
```

```
a=framerate:30
    &lt;/mediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
 </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.28.6   F5

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#ModifyCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:ModifyCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <SecretKey>secret101</SecretKey>
   <TargetCallID>call101</TargetCallID>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
  </u:ModifyCall>
 </s:Body>
</s:Envelope>
```

C.28.7   F6

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:ModifyCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1" />
```

```
    </s:Body>
  </s:Envelope>
```

C.28.8   F7

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callID&gt;call101&lt;/callID&gt;
  &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
  &lt;callStatus&gt;SendingModifyRequest&lt;/callStatus&gt;
  &lt;priority&gt;Normal&lt;/priority&gt;
  &lt;remoteParty&gt;
   &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
  &lt;/remoteParty&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
  &lt;/TCList&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
&lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.28.9   F8

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.28.10 F9

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Modified&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
      &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
      &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
   &lt;/mediaCapability&gt;
   &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.28.11 F10

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.28.12 F11

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
```

```
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.22:10022
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
       &lt;/mediaCapability&gt;
       &lt;/mms:mediaCapabilityInfo&gt;
       </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.28.13 F12

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
    <MediaSessionID>media102</MediaSessionID>
    <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
```

```
c=IN IP4 192.168.1.22
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
      &lt;/mediaCapability &gt;
     &lt;/mms:mediaCapabilityInfo&gt;
    </TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
  </s:Body>
</s:Envelope>
```

C.28.14   F13

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10022
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;mms:mediaSessionInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
   http://www.upnp.org/schemas/phone/mms-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
   &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.22
s=-
c=IN IP4 192.168.1.22
t=0 0
m=video 12022 RTP/AVP 96
c=IN IP4 192.168.1.22
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
    &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
  </e:property>
</e:propertyset>
```

C.28.15   F14

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.28.16 F15

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
    <TelCPName>TV@Living</TelCPName>
    <SecretKey>secret101</SecretKey>
    <TargetCallID>call101</TargetCallID>
    <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:TCList
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
    &lt;/cams:TCList&gt;</TCList>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11022 RTP/AVP 0
c=IN IP4 192.168.1.22
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/mediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
   </u:StartMediaTransfer>
 </s:Body>
</s:Envelope>
```

C.28.17 F16

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
```

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.28.18 F17

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Talking&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn102&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media102&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
   &lt;/mediaCapability&gt;
   &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```
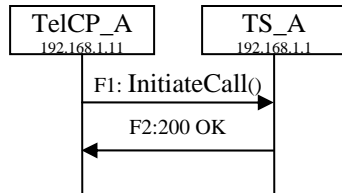
C.28.19 F18

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.29 Initiate a Call

C.29.1   Figure

C.29.2   F1

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#InitiateCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:InitiateCall xmlns:u="urn:schemas-upnp-org:service: CallManagement:1">
    <CalleeID> tel:0774940201</CalleeID>
  </u:InitiateCall>
  </s:Body>
</s:Envelope>
```

C.29.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:InitiateCallResponse xmlns:u="urn:schemas-upnp-org:service:CallManagement:1" />
   <CallID>call101</CallID>
  </u:InitiateCallResponse>
 </s:Body>
</s:Envelope>
```
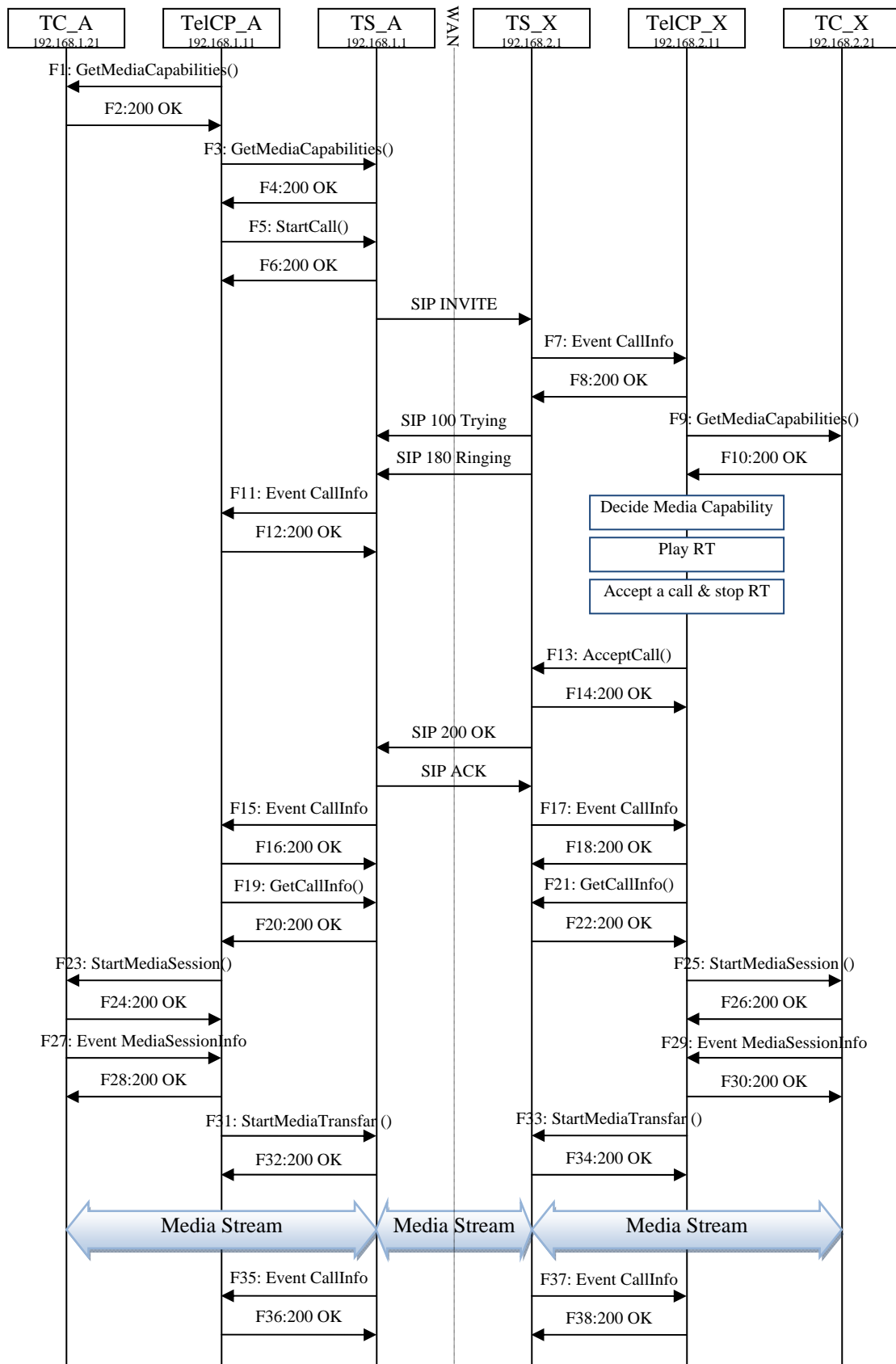
C.30 Create an outgoing Call (Monopolization Mode Call(PHONE-TelCP))

C.30.1   Figure

TC_A 192.168.1.21	TelCP_A 192.168.1.11	TS_A 192.168.1.1	WAN	TS_X 192.168.2.1	TelCP_X 192.168.2.11	TC_X 192.168.2.21

F1: GetMediaCapabilities()

F2:200 OK

F3: GetMediaCapabilities()

F4:200 OK

F5: StartCall()

F6:200 OK

SIP INVITE

F7: Event CallInfo

F8:200 OK

SIP 100 Trying

F9: GetMediaCapabilities()

SIP 180 Ringing

F10:200 OK

F11: Event CallInfo

F12:200 OK

Decide Media Capability

Play RT

Accept a call & stop RT

F13: AcceptCall()

F14:200 OK

SIP 200 OK

SIP ACK

F15: Event CallInfo

F17: Event CallInfo

F16:200 OK

F18:200 OK

F19: GetCallInfo()

F21: GetCallInfo()

F20:200 OK

F22:200 OK

F23: StartMediaSession()

F25: StartMediaSession ()

F24:200 OK

F26:200 OK

F27: Event MediaSessionInfo

F29: Event MediaSessionInfo

F28:200 OK

F30:200 OK

F31: StartMediaTransfar ()

F33: StartMediaTransfar ()

F32:200 OK

F34:200 OK

Media Stream   Media Stream   Media Stream

F35: Event CallInfo

F37: Event CallInfo

F36:200 OK

F38:200 OK

C.30.2   F1

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.21:10021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.30.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12021 RTP/AVP 96
c=IN IP4 192.168.1.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
```

```
        &lt;/mms:mediaCapabilityInfo&gt;
       </SupportedMediaCapabilityInfo>
     </u:GetMediaCapabilitiesResponse>
    </s:Body>
   </s:Envelope>
```

C.30.4   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service: CallManagement:1">
    <TCMediaCapabilityInfo></TCMediaCapabilityInfo>
   </u:GetMediaCapabilities>
   </s:Body>
</s:Envelope>
```

C.30.5   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
     <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
      http://www.upnp.org/schemas/phone/cams-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
```

```
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.30.6   F5

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <SecretKey>secret101</SecretKey>
   <CalleeID> tel:0774940201</CalleeID>
   <CallPriority>Normal</CallPriority>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
   <CallMode>PHONE-TelCP</CallMode>
  </u:StartCall>
 </s:Body>
</s:Envelope>
```

C.30.7   F6

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
```

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1">
   <CallID>call101</CallID>
  </m:StartCallResponse>
 </s:Body>
</s:Envelope>
```

C.30.8   F7

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call201&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Ringing&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
   &lt;/mediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.30.9   F8

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.30.10 F9

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.21:20021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.30.11 F10

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
    <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22021 RTP/AVP 96
c=IN IP4 192.168.2.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000 1200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
    &lt;/mms:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
```

```
          </u:GetMediaCapabilitiesResponse>
         </s:Body>
        </s:Envelope>
```

C.30.12 F11

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;TV@Living&lt;/targetNames&gt;
   &lt;callStatus&gt;Calling&lt;/callStatus&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.30.13 F12

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.30.14 F13

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#AcceptCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:AcceptCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>phone@Bedroom</TelCPName>
   <SecretKey>secret201</SecretKey>
   <TargetCallID>call201</TargetCallID>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
```

```
http://www.upnp.org/schemas/phone/cams-v1.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
&lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
 &lt;/mediaCapability&gt;
 &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
<CallMode>PHONE-TelCP</CallMode>
</u:AcceptCall>
</s:Body>
</s:Envelope>
```

C.30.15 F14

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:AcceptCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1"
/>
 </s:Body>
</s:Envelope>
```

C.30.16 F15

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
```

```
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
    &lt;callID&gt;call101&lt;/callID&gt;
    &lt;targetNames type="TelCPName"&gt;TV@Living&lt;/targetNames&gt;
    &lt;callStatus&gt;Connected&lt;/callStatus&gt;
   &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
 </e:propertyset>
```

C.30.17 F16

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.30.18 F17

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:callInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"
     xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
    &lt;callID&gt;call201&lt;/callID&gt;
    &lt;targetNames type="TelCPName"&gt;phone@Bedroom&lt;/targetNames&gt;
    &lt;callStatus&gt;Connected&lt;/callStatus&gt;
   &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
 </e:propertyset>
```

C.30.19 F18

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.30.20 F19

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetCallInfo"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
```

```
     <s:Body>
      <u:GetCallInfo xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
       <TelCPName>TV@Living</TelCPName>
       <SecretKey>secret101</SecretKey>
       <TargetCallID>call101</TargetCallID>
      </u:GetCallInfo>
     </s:Body>
    </s:Envelope>
```

C.30.21   F20

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetCallInfoResponse xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <callInfoList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;cams:callInfoList
       xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
       http://www.upnp.org/schemas/phone/cams-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:cams"
       xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callInfo&gt;
  &lt;callID&gt;call101&lt;/callID&gt;
  &lt;TelCPNames&gt;TV@Living&lt;/TelCPNames&gt;
  &lt;callStatus&gt;Connected &lt;/callStatus&gt;
  &lt;priority&gt;"Normal"&lt;/priority&gt;
  &lt;peer&gt;
   &lt;peer:id&gt;0774940201&lt;peer:id&gt;
  &lt;/peer&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
        &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
  &lt;/TCList&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
  &lt;/mediaCapability&gt;
  &lt;/callInfo&gt;
&lt;/cams:callInfoList&gt;</callInfoList>
    </m:GetCallInfoResponse>
```

```
   </s:Body>
  </s:Envelope>
```

C.30.22 F21

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetCallInfo"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetCallInfo xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>phone@Bedroom</TelCPName>
   <SecretKey>secret201</SecretKey>
   <TargetCallID>call201</TargetCallID>
  </u:GetCallInfo>
 </s:Body>
</s:Envelope>
```

C.30.23 F22

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetCallInfoResponse xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <callInfoList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:callInfoList
      xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
      http://www.upnp.org/schemas/phone/cams-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:cams"
      xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
  &lt;callInfo&gt;
  &lt;callID&gt;call201&lt;/callID&gt;
  &lt;TelCPNames&gt;phone@Bedroom&lt;/TelCPNames&gt;
  &lt;callStatus&gt;Connected &lt;/callStatus&gt;
  &lt;priority&gt;"Normal"&lt;/priority&gt;
  &lt;peer&gt;
   &lt;peer:id&gt;0355550101&lt;peer:id&gt;
  &lt;/peer&gt;
  &lt;TCList&gt;
   &lt;TC&gt;
           &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
```

```
&lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
  &lt;/mediaCapability&gt;
 &lt;/callInfo&gt;
&lt;/cams:callInfoList&gt;</callInfoList>
  </m:GetCallInfoResponse>
 </s:Body>
</s:Envelope>
```

C.30.24 F23

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.21:10021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
       &lt;/mediaCapability&gt;
       &lt;/mms:mediaCapabilityInfo&gt;
       </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.30.25 F24

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
```

Content-Length: [bytes in body]

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <MediaSessionID>media101</MediaSessionID>
     <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
        http://www.upnp.org/schemas/phone/mms-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
      &lt;/mediaCapability &gt;
     &lt;/mms:mediaCapabilityInfo&gt;
     </TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
 </s:Body>
</s:Envelope>
```

C.30.26 F25

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2:21:20021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
        http://www.upnp.org/schemas/phone/mms-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21001 RTP/AVP 0
```

```
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
      &lt;/mediaCapability&gt;
      &lt;/mms:mediaCapabilityInfo&gt;
      </TSMediaCapabilityInfo>
   </u:StartMediaSession>
  </s:Body>
</s:Envelope>
```

C.30.27 F26

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
      <MediaSessionID>media201</MediaSessionID>
      <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
       &lt;mms:mediaCapabilityInfo
         xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
         http://www.upnp.org/schemas/phone/mms-v1.xsd"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
         &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
      &lt;/mediaCapability&gt;
      &lt;/mms:mediaCapabilityInfo&gt;</TCMediaCapabilityInfo>
    </u:StartMediaSessionResponse>
  </s:Body>
</s:Envelope>
```

C.30.28 F27

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10021
SEQ: [sequence number]
Connection: Keep-Alive
```

```
<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;mms:mediaSessionInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
   http://www.upnp.org/schemas/phone/mms-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
   &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
 </e:property>
</e:propertyset>
```

C.30.29 F28

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.30.30 F29

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20021
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;mms:mediaSessionInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
   http://www.upnp.org/schemas/phone/mms-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
   &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
```

```
c=IN IP4 192.168.2.21
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/mediaCapability&gt;
   &lt;/mms:mediaSessionInfo&gt;</MediaSessionInfo>
  </e:property>
</e:propertyset>
```

C.30.31 F30

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.30.32 F31

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
    <TelCPName>TV@Living</TelCPName>
    <SecretKey>secret101</SecretKey>
    <TargetCallID>call101</TargetCallID>
    <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:TCList
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
    &lt;/cams:TCList&gt;</TCList>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11021 RTP/AVP 0
c=IN IP4 192.168.1.21
a=rtpmap:0 PCMU/8000
```

```
      a=ptime:20
        &lt;/mediaCapability&gt;
      &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
    </u:StartMediaTransfer>
  </s:Body>
</s:Envelope>
```

C.30.33 F32

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.30.34 F33

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
    <TelCPName>phone @Bedroom</TelCPName>
    <SecretKey>secret201</SecretKey>
    <TargetCallID>call201</TargetCallID>
    <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:TCList
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
    &lt;/cams:TCList&gt;</TCList>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
```

```
         xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
         &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21021 RTP/AVP 0
c=IN IP4 192.168.2.21
a=rtpmap:0 PCMU/8000
a=ptime:20
         &lt;/mediaCapability&gt;
       &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
     </u:StartMediaTransfer>
   </s:Body>
</s:Envelope>
```

C.30.35 F34

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
</s:Body>
</s:Envelope>
```

C.30.36 F35

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
```

<targetNames type="TelCPName">*TV@Living*</targetNames>
<callStatus>*Talking*</callStatus>
</cams:callInfo></CallInfo>
  </e:property>
</e:propertyset>

C.30.37 F36

HTTP/1.1 200 OK
Content-Length: 0

C.30.38 F37

NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo><?xml version="1.0" encoding="utf-8"?>
  <cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer">
   <callID>*call201*</callID>
   <targetNames type="TelCPName">*phone@Bedroom*</targetNames>
   <callStatus>*Talking*</callStatus>
  </cams:callInfo></CallInfo>
  </e:property>
</e:propertyset>

C.30.39 F38

HTTP/1.1 200 OK
Content-Length: 0

C.31 Terminate Call (But the specified TelCP is not authorized.)

C.31.1   Figure
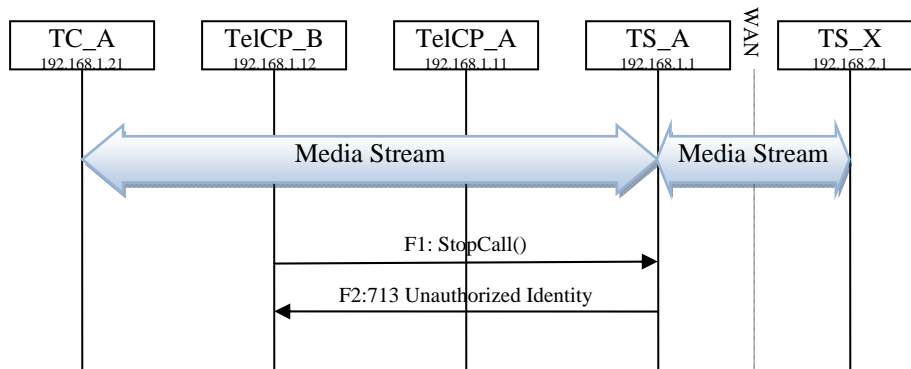
C.31.2   F1

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StopCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>TV@Living</TelCPName>
   <SecretKey>wrongkey</SecretKey>
   <CallID>cal101</CallID>
  </u:StopCall>
 </s:Body>
</s:Envelope>
```

C.31.3   F2

```
HTTP/1.1 500 Internal Server Error
Content-Length: [bytes in body]

<s:Envelope
 xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
 s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <s:Fault>
   <faultcode>s:Client</faultcode>
   <faultstring>UPnPError</faultstring>
   <detail>
    <UPnPError xmlns="urn:schemas-upnp-org:control-1-0">
     <errorCode>713</errorCode>
     <errorDescription>Unauthorized Identity</errorDescription>
    </UPnPError>
   </detail>
  </s:Fault>
```
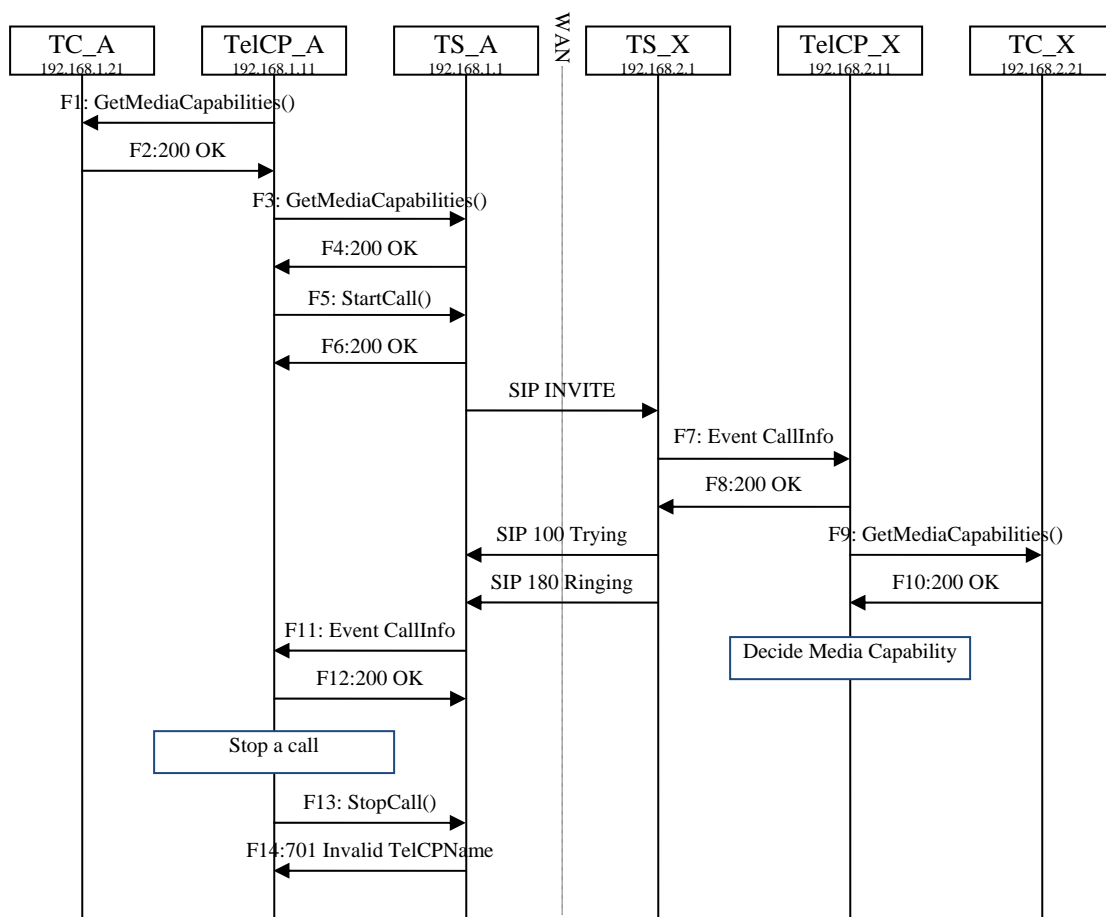
```
    </s:Body>
  </s:Envelope>
```

C.32 Cancel an outgoing Call (But the specified TelCP is not authorized.)

C.32.1   Figure

C.32.2   F1 to F12 are the same as "C.12 Create a Call"

C.32.3   F13

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StopCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]
```

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StopCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName>Alice's TV</TelCPName>
   <SecretKey>secret101</SecretKey>
   <CallID>call101</CallID>
  </u:StopCall>
 </s:Body>
</s:Envelope>
```
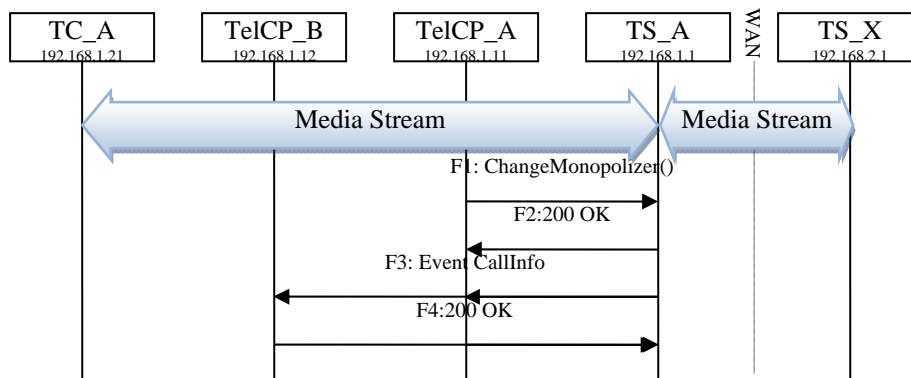
C.32.4   F14

```
HTTP/1.1 500 Internal Server Error
Content-Length: [bytes in body]

<s:Envelope
 xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
 s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <s:Fault>
   <faultcode>s:Client</faultcode>
   <faultstring>UPnPError</faultstring>
   <detail>
    <UPnPError xmlns="urn:schemas-upnp-org:control-1-0">
     <errorCode>713</errorCode>
     <errorDescription>Unauthorized Identity</errorDescription>
    </UPnPError>
   </detail>
  </s:Fault>
 </s:Body>
</s:Envelope>
```

C.33 Change TelCP which Monopolize the Call

C.33.1   Figure

C.33.2   F1

POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1

```
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#ChangeMonopolizer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:ChangeMonopolizer xmlns:u="urn:schemas-upnp-org:service: CallManagement:1">
  <CurrentMonopolizer>TV@Living</CurrentMonopolizer>
  <SecretKey>secret101</SecretKey>
  <CallID>call101</CallID>
  <NewMonopolizer>HD-TV@Living</NewMonopolizer>
  </u:ChangeMonopolizer>
  </s:Body>
</s:Envelope>
```

C.33.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:ChangeMonopolizerResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.33.4   F3

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.12:10012
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
```

<callID>*call101*</callID>
<targetNames type="TelCPName">*HD-TV @Living*</targetNames>
<callStatus>*Talking*</callStatus>
<priority>Normal</priority>
<remoteParty>
 <peer:id>*0774940201*</peer:id>
</remoteParty>
<TCList>
 <TC>
  <UDN>uuid:*97ef6efa-ac89-4ea2-0001-udn101*</UDN>
  <mediaSessionID>*media101*</mediaSessionID>
 </TC>
</TCList>
<mediaCapability format="SDP">v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
  </mediaCapability>
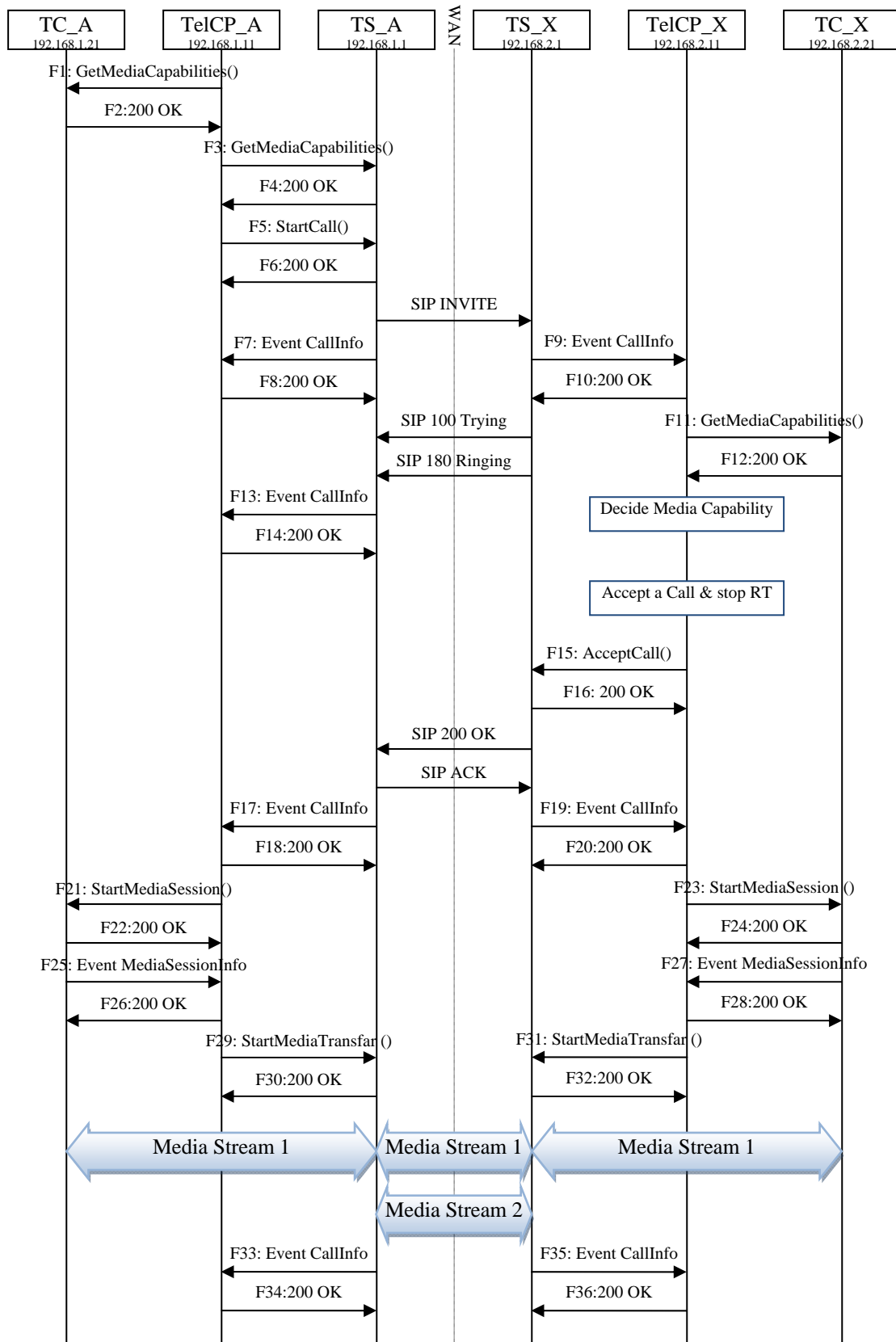 </cams:callInfo></CallInfo>
 </e:property>
</e:propertyset>

C.33.5   F4

HTTP/1.1 200 OK
Content-Length: 0

C.34 Create a Call with TC-Based and TS-Based Media Handlings

C.34.1   Figure

TC_A	TelCP_A	TS_A	WAN	TS_X	TelCP_X	TC_X
192.168.1.21	192.168.1.11	192.168.1.1		192.168.2.1	192.168.2.11	192.168.2.21

F1: GetMediaCapabilities()

F2:200 OK

F3: GetMediaCapabilities()

F4:200 OK

F5: StartCall()

F6:200 OK

SIP INVITE

F7: Event CallInfo

F9: Event CallInfo

F8:200 OK

F10:200 OK

SIP 100 Trying

F11: GetMediaCapabilities()

SIP 180 Ringing

F12:200 OK

F13: Event CallInfo

Decide Media Capability

F14:200 OK

Accept a Call & stop RT

F15: AcceptCall()

F16: 200 OK

SIP 200 OK

SIP ACK

F17: Event CallInfo

F19: Event CallInfo

F18:200 OK

F20:200 OK

F21: StartMediaSession()

F23: StartMediaSession ()

F22:200 OK

F24:200 OK

F25: Event MediaSessionInfo

F27: Event MediaSessionInfo

F26:200 OK

F28:200 OK

F29: StartMediaTransfer ()

F31: StartMediaTransfer ()

F30:200 OK

F32:200 OK

Media Stream 1   Media Stream 1   Media Stream 1

Media Stream 2

F33: Event CallInfo

F35: Event CallInfo

F34:200 OK

F36:200 OK

C.34.2   F1

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.21:10021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.34.3   F2

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=video 12021 RTP/AVP 96
c=IN IP4 192.168.1.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120008 6c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
    &lt;/mms:mediaCapabilityInfo&gt;
    </SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
 </s:Body>
```

```
        </s:Envelope>
```

C.34.4   F3

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TCMediaCapabilityInfo></TCMediaCapabilityInfo>
  </u:GetMediaCapabilities>
  </s:Body>
</s:Envelope>
```

C.34.5   F4

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:CallManagement:1">
   <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;cams:mediaCapabilityInfo
      xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
      http://www.upnp.org/schemas/phone/cams-v1.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
      &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
      &lt;/mediaCapability&gt;
```

```
    &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/nativeMediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
  </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.34.6   F5

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName></TelCPName>
   <SecretKey></SecretKey>
   <CalleeID> tel:0774940201</CalleeID>
   <CallPriority>Normal</CallPriority>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
  &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=video 12021 RTP/AVP 96
c=IN IP4 192.168.1.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
    &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
```

```
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/nativeMediaCapability&gt;
   &lt;/cams:mediaCapabilityInfo&gt;
   </MediaCapabilityInfo>
  <CallMode>Non-Monopolize</CallMode>
 </u:StartCall>
 </s:Body>
</s:Envelope>
```

C.34.7   F6

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1">
   <CallID>call101</CallID>
  </m:StartCallResponse>
 </s:Body>
</s:Envelope>
```

C.34.8   F7

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Dialing&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
```

```
&lt;peer:id&gt;0774940201&lt;/peer:id&gt;
    &lt;/remoteParty&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
    &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/nativeMediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.34.9 F8

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.34.10 F9

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
    &lt;callID&gt;call201&lt;/callID&gt;
```

<targetNames type="TelCPName">*</targetNames>
<callStatus>*Ringing*</callStatus>
<priority>Normal</priority>
<remoteParty>
<peer:id>*0355550101*</peer:id>
</remoteParty>
<mediaCapability format="SDP">v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
</mediaCapability>
<nativeMediaCapability format="SDP">v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
</nativeMediaCapability>
</cams:callInfo></CallInfo>
</e:property>
</e:propertyset>

C.34.11 F10

HTTP/1.1 200 OK
Content-Length: 0

C.34.12 F11

POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-
org:service:MediaManagement:1#GetMediaCapabilities"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.21:20021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilities xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1"
>

```
   <TSMediaCapabilityInfo></TSMediaCapabilityInfo>
  </u:GetMediaCapabilities>
 </s:Body>
</s:Envelope>
```

C.34.13 F12

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:GetMediaCapabilitiesResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <SupportedMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=video 22021 RTP/AVP 96
c=IN IP4 192.168.2.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
a=framerate:30
       &lt;/mediaCapability&gt;
      &lt;/mms:mediaCapabilityInfo&gt;</SupportedMediaCapabilityInfo>
   </u:GetMediaCapabilitiesResponse>
 </s:Body>
</s:Envelope>
```

C.34.14 F13

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
```

```
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Calling&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
     &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/nativeMediaCapability&gt;
   &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
</e:propertyset>
```

C.34.15 F14

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.34.16 F15

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#AcceptCall"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
```

```
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:AcceptCall xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName></TelCPName>
   <SecretKey></SecretKey>
   <TargetCallID>call201</TargetCallID>
   <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
&lt;cams:mediaCapabilityInfo
 xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
 http://www.upnp.org/schemas/phone/cams-v1.xsd"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
 &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=video 22021 RTP/AVP 96
c=IN IP4 192.168.2.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120008c6c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
     &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/nativeMediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
   <CallMode>"Non-Monopolize"</CallMode>
  </u:AcceptCall>
 </s:Body>
</s:Envelope>
```

C.34.17 F16

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
   <m:AcceptCallResponse xmlns:m="urn:schemas-upnp-org:service:CallManagement:1"
/>
```

```
    </s:Body>
   </s:Envelope>
```

C.34.18   F17

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Connected&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
     &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/nativeMediaCapability&gt;
   &lt;/cams:callInfo&gt;</CallInfo>
```

```
     </e:property>
   </e:propertyset>
```

C.34.19 F18

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.34.20 F19

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
   <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:callInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"
    xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call201&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Connected&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
     &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
```

```
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/nativeMediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.34.21 F20

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.34.22 F21

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.21:10021
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;mms:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
     http://www.upnp.org/schemas/phone/mms-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000000100000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
    &lt;/mms:mediaCapabilityInfo&gt;
    </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.34.23 F22

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]
```

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
   <MediaSessionID>media101</MediaSessionID>
   <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=video 12021 RTP/AVP 96
c=IN IP4 192.168.1.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability &gt;
     &lt;/mms:mediaCapabilityInfo&gt;
     </TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
  </s:Body>
</s:Envelope>
```

C.34.24 F23

```
POST /_urn:upnp-org:serviceId:MediaManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:MediaManagement:1#StartMediaSession"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.2:21:20021
Content-Length: [bytes in body]
```

```
<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaSession xmlns:u="urn:schemas-upnp-org:service:MediaManagement:1">
   <TSMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
     &lt;mms:mediaCapabilityInfo
       xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
       http://www.upnp.org/schemas/phone/mms-v1.xsd"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
       &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
```

```
t=0 0
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
       &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;
     </TSMediaCapabilityInfo>
  </u:StartMediaSession>
 </s:Body>
</s:Envelope>
```

C.34.25 F24

```
HTTP/1.1 200 OK
EXT:
CONTENT-TYPE: text/xml ; charset="utf-8"
SERVER: Windows NT/5.0, UPnP/1.0, Intel CLR SDK/1.0
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaSessionResponse xmlns:u="urn:schemas-upnp-
org:service:MediaManagement:1">
     <MediaSessionID>media201</MediaSessionID>
     <TCMediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
      &lt;mms:mediaCapabilityInfo
        xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
        http://www.upnp.org/schemas/phone/mms-v1.xsd"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:cams="urn:schemas-upnp-org:phone:mms"&gt;
        &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=video 22021 RTP/AVP 96
c=IN IP4 192.168.2.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
       &lt;/mediaCapability&gt;
     &lt;/mms:mediaCapabilityInfo&gt;</TCMediaCapabilityInfo>
   </u:StartMediaSessionResponse>
 </s:Body>
</s:Envelope>
```

C.34.26 F25

```
NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
```

HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10021
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <MediaSessionInfo><?xml version="1.0" encoding="utf-8"?>
   <mms:mediaSessionInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mms="urn:schemas-upnp-org:phone:mms">
    <mediaSessionID>*media101*</mediaSessionID>
    <mediaSessionStatus>*Started*</mediaSessionStatus>
     <mediaCapability format="SDP">v=0
o=- 0 0 IN IP4 192.168.1.21
s=-
c=IN IP4 192.168.1.21
t=0 0
m=video 12021 RTP/AVP 96
c=IN IP4 192.168.1.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
     </mediaCapability>
   </cams:callInfo></CallInfo>
 </e:property>
</e:propertyset>

C.34.27 F26

HTTP/1.1 200 OK
Content-Length: 0

C.34.28 F27

NOTIFY /_urn:upnp-org:serviceId:MediaManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20021
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>

```
   <MediaSessionInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;mms:mediaSessionInfo
    xsi:schemaLocation="urn:schemas-upnp-org:phone:mms
    http://www.upnp.org/schemas/phone/mms-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:mms="urn:schemas-upnp-org:phone:mms"&gt;
   &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
   &lt;mediaSessionStatus&gt;Started&lt;/mediaSessionStatus&gt;
   &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.21
s=-
c=IN IP4 192.168.2.21
t=0 0
m=video 22021 RTP/AVP 96
c=IN IP4 192.168.2.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000000120086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
   &lt;/cams:callInfo&gt;</CallInfo>
  </e:property>
</e:propertyset>
```

C.34.29 F28

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.34.30 F29

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
HOST: 192.168.1.1:10001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
  <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
   <TelCPName></TelCPName>
   <SecretKey></SecretKey>
   <TargetCallID>call101</TargetCallID>
   <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
   &lt;cams:TCList
    xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
    http://www.upnp.org/schemas/phone/cams-v1.xsd"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
   &lt;TC&gt;
    &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
    &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
   &lt;/TC&gt;
   &lt;/cams:TCList&gt;</TCList>
```

```
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=video 12021 RTP/AVP 96
c=IN IP4 192.168.1.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
    &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.11
s=-
c=IN IP4 192.168.1.11
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/nativeMediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
   </u:StartMediaTransfer>
  </s:Body>
</s:Envelope>
```

C.34.31 F30

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
 </s:Body>
</s:Envelope>
```

C.34.32 F31

```
POST /_urn:upnp-org:serviceId:CallManagement_control HTTP/1.1
SOAPACTION: "urn:schemas-upnp-org:service:CallManagement:1#StartMediaTransfer"
CONTENT-TYPE: text/xml ; charset="utf-8"
```

```
HOST: 192.168.2.1:20001
Content-Length: [bytes in body]

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
 <s:Body>
   <u:StartMediaTransfer xmlns:u="urn:schemas-upnp-org:service:CallManagement:1">
    <TelCPName></TelCPName>
    <SecretKey></SecretKey>
    <TargetCallID>call201</TargetCallID>
    <TCList>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:TCList
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
    &lt;/cams:TCList&gt;</TCList>
    <MediaCapabilityInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
    &lt;cams:mediaCapabilityInfo
     xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
     http://www.upnp.org/schemas/phone/cams-v1.xsd"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns:cams="urn:schemas-upnp-org:phone:cams"&gt;
     &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=video 22021 RTP/AVP 96
c=IN IP4 192.168.2.21
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b50900000100000001200086c40fa28a021e0a21
a=framerate:30
     &lt;/mediaCapability&gt;
     &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.11
s=-
c=IN IP4 192.168.2.11
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
     &lt;/nativeMediaCapability&gt;
     &lt;/mediaCapability&gt;
    &lt;/cams:mediaCapabilityInfo&gt;</MediaCapabilityInfo>
   </u:StartMediaTransfer>
 </s:Body>
</s:Envelope>
```

C.34.33 F32

```
HTTP/1.1 200 OK
Content-Length: [bytes in body]
CONTENT-TYPE: text/xml; charset="utf-8"
SERVER: TS-HTTP/1.1 UPnP/1.0 UPnP-Device-Host/1.0
EXT:

<?xml version="1.0" encoding="utf-8"?>
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/"
s:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
 <s:Body>
  <m:StartMediaTransferResponse xmlns:m="urn:schemas-upnp-
org:service:CallManagement:1" />
</s:Body>
</s:Envelope>
```

C.34.34 F33

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.1.11:10011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-10001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call101&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Talking&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0774940201&lt;/peer:id&gt;
   &lt;/remoteParty&gt;
   &lt;TCList&gt;
    &lt;TC&gt;
     &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn101&lt;/UDN&gt;
     &lt;mediaSessionID&gt;media101&lt;/mediaSessionID&gt;
    &lt;/TC&gt;
   &lt;/TCList&gt;
    &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
```

```
c=IN IP4 192.168.1.1
t=0 0
m=video 12001 RTP/AVP 96
c=IN IP4 192.168.1.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b509000001000000012000086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
    &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.1.1
s=-
c=IN IP4 192.168.1.1
t=0 0
m=audio 11001 RTP/AVP 0
c=IN IP4 192.168.1.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/nativeMediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.34.35 F34

```
HTTP/1.1 200 OK
Content-Length: 0
```

C.34.36 F35

```
NOTIFY /_urn:upnp-org:serviceId:CallManagement HTTP/1.1
HOST: 192.168.2.11:20011
CONTENT-TYPE: text/xml
Content-Length: [bytes in body]
NT: upnp:event
NTS: upnp:propchange
SID: uuid:c3580410-1dd1-11b2-8000-20001
SEQ: [sequence number]
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<e:propertyset xmlns:e="urn:schemas-upnp-org:event-1-0">
 <e:property>
  <CallInfo>&lt;?xml version="1.0" encoding="utf-8"?&gt;
  &lt;cams:callInfo
   xsi:schemaLocation="urn:schemas-upnp-org:phone:cams
   http://www.upnp.org/schemas/phone/cams-v1.xsd"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:cams="urn:schemas-upnp-org:phone:cams"
   xmlns:peer="urn:schemas-upnp-org:phone:peer"&gt;
   &lt;callID&gt;call201&lt;/callID&gt;
   &lt;targetNames type="TelCPName"&gt;*&lt;/targetNames&gt;
   &lt;callStatus&gt;Talking&lt;/callStatus&gt;
   &lt;priority&gt;Normal&lt;/priority&gt;
   &lt;remoteParty&gt;
    &lt;peer:id&gt;0355550101&lt;/peer:id&gt;
```

```
&lt;/remoteParty&gt;
&lt;TCList&gt;
 &lt;TC&gt;
   &lt;UDN&gt;uuid:97ef6efa-ac89-4ea2-0001-udn201&lt;/UDN&gt;
   &lt;mediaSessionID&gt;media201&lt;/mediaSessionID&gt;
 &lt;/TC&gt;
&lt;/TCList&gt;
 &lt;mediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=video 22001 RTP/AVP 96
c=IN IP4 192.168.2.1
b=AS:2500
a=rtpmap:96 MP4V-ES/90000
a=fmtp:96 profile-level-
id=4;config=000001b004000001b5090000010000001200086c40fa28a021e0a21
a=framerate:30
    &lt;/mediaCapability&gt;
    &lt;nativeMediaCapability format="SDP"&gt;v=0
o=- 0 0 IN IP4 192.168.2.1
s=-
c=IN IP4 192.168.2.1
t=0 0
m=audio 21001 RTP/AVP 0
c=IN IP4 192.168.2.1
a=rtpmap:0 PCMU/8000
a=ptime:20
    &lt;/nativeMediaCapability&gt;
  &lt;/cams:callInfo&gt;</CallInfo>
 </e:property>
</e:propertyset>
```

C.34.37 F36

```
HTTP/1.1 200 OK
Content-Length: 0
```