ETSI TS 129 199-11 V8.1.0 (2009-10)

Technical Specification

Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
LTE;
Open Service Access (OSA);
Parlay X web services;
Part 11: Audio call
(3GPP TS 29.199-11 version 8.1.0 Release 8)

Reference
RTS/TSGC-0029199-11v810

Keywords
GSM, LTE, UMTS

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Foreword

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The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under http://webapp.etsi.org/key/queryform.asp.

Contents

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

3GPP acknowledges the contribution of the Parlay X Web Services specifications from The Parlay Group. The Parlay Group is pleased to see 3GPP acknowledge and publish the present document, and the Parlay Group looks forward to working with the 3GPP community to improve future versions of the present document.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

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- x the first digit:
  - 1 presented to TSG for information;
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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

The present document is part 11 of a multi-part deliverable covering the 3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Open Service Access (OSA); Parlay X Web Services, as identified below:

Part 1: "Common"
Part 2: "Third party call"
Part 3: "Call Notification"
Part 4: "Short Messaging"
Part 5: "Multimedia Messaging"
Part 6: "Payment"
Part 7: "Account management"
Part 8: "Terminal Status"
Part 9: "Terminal location"
Part 10: "Call handling"
Part 11: "Audio call"
Part 12: "Multimedia conference"
Part 13: "Address list management"
Part 14: "Presence"
Part 15: "Message Broadcast"
Part 16: "Geocoding"
Part 17: "Application driven Quality of Service (QoS)"
Part 18: "Device Capabilities and Configuration"
Part 19: "Multimedia streaming control"
Part 20: "Multimedia multicast session management"
Part 21: "Content management"
Part 22: "Policy"

1 Scope

The present document is Part 11 of the Stage 3 Parlay X Web Services specification for Open Service Access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e. the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198 [3]. The requirements for OSA are contained in 3GPP TS 22.127 [2].

The present document specifies the Audio Call Web Service aspects of the interface. All aspects of the Audio Call Web Service are defined here, these being:

- Name spaces.
- Sequence diagrams.
- Data definitions.
- Interface specification plus detailed method descriptions.
- Fault definitions.
- Service policies.
- WSDL Description of the interfaces.

The web service had been extended to support media.

The present document has been defined jointly between 3GPP TSG CT WG5, ETSI TISPAN and The Parlay Group.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 22.127: "Service Requirement for the Open Services Access (OSA); Stage 1".

[3] 3GPP TS 23.198: "Open Service Access (OSA); Stage 2".

[4] 3GPP TS 22.101: "Service aspects; Service principles".

[5] W3C Recommendation (2 May 2001): "XML Schema Part 2: Datatypes".

NOTE: Available at http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/.

[6] 3GPP TS 29.199-1: "Open Service Access (OSA); Parlay X Web Services; Part 1: Common".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 29.199-1 [6] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TS 29.199-1 [6] apply.

4 Detailed service description

The service provides a flexible way to provide multimedia message delivery and the dynamic management of the media involved for the call participants. The interface is very simple, not requiring the developer to manage the creation of the call.

The Audio Call web service allows media to be added/dropped for any ongoing call. This web service also allows interaction with other call control web services (e.g. multimedia conference, third party call), enabling delivery of multimedia to call participants in an ongoing call.

The underlying model of the service is based on the following entities:

- **Call Session:** a call (uniquely identified) to which participants can be added/removed.
- **Call Participant:** each of the call parties (uniquely identified) involved in the call session.
- **Media:** the call can utilize multiple media types to support the participants' communication. In particular both audio and video streams are available, including the specific stream direction (i.e. incoming, outgoing, bidirectional).

NOTE 1: Call participants in a Call Session are anticipated to be uniquely identifiable using their URI address.

There are several mechanisms which may be utilized for the message content:

- Text, to be rendered using a Text-To-Speech (TTS) engine.
- Audio content (such as .WAV content), to be rendered by an audio player.
- VoiceXML, to be rendered using a VoiceXML browser.
- Video, to provide video streaming to the user.
- Capture media input from the end user

The service may provide one or more mechanisms, as determined by service policy.

The service allows application control of the call participants" multimedia in a call:

- Allow multiple media types for each participant. In particular both audio and video as well as chat and data.
- Add and delete media types.
- Control the specific media stream direction (i.e. incoming, outgoing, bidirectional) for each media type.
- Get the current media status of a single call participant or for all the call participants in a call.
- Control the media interactions for a call participant.

A service policy determines if multimedia application control is supported.

5 Namespaces

The data types are defined in the namespace:

http://www.csapi.org/schema/parlayx/ audio_call/v4_0

The PlayMedia interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/audio_call/play_media/v4_0

The CaptureMedia interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/audio_call/capture_media/v4_0

The Multimedia interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/audio_call/multimedia/v4_0

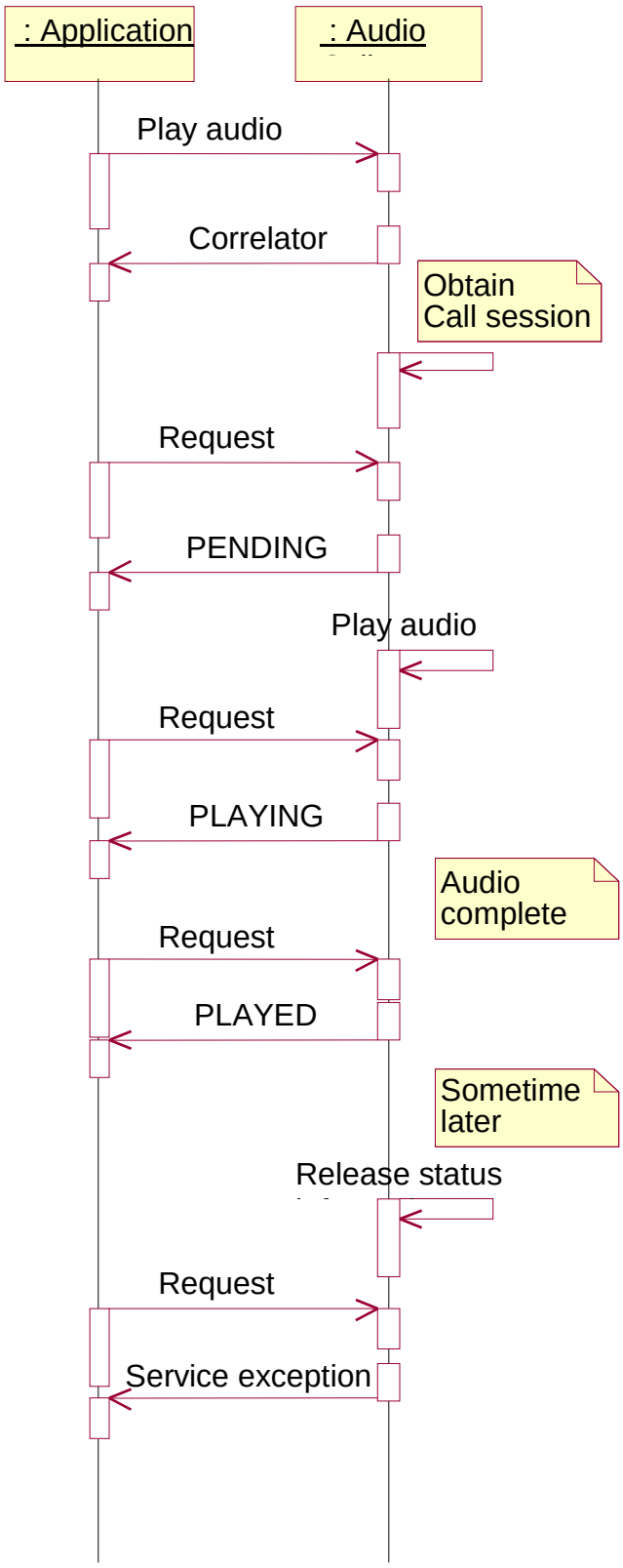
The 'xsd' namespace is used in the present document to refer to the XML Schema data types defined in XML Schema http:///[5]. The use of the name 'xsd' is not semantically significant.

6 Sequence diagrams

6.1 Play audio and check status

Pattern: Request / response.

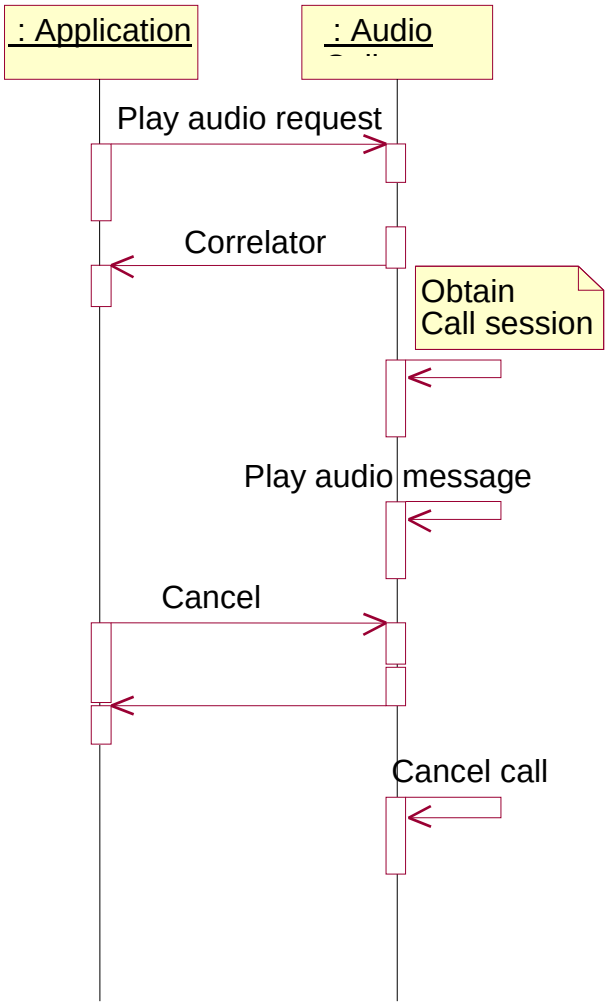
This example shows an audio message being played, and the different responses to status requests that occur at different phases. Note that the last response, a service exception, reflects the transient nature of results, and that these results will expire.


: Application
: Audio
Play audio
Correlator
Obtain
Call session
Request
PENDING
Play audio
Request
PLAYING
Audio
complete
Request
PLAYED
Sometime
later
Release status
Request
Service exception

6.2 Play audio and cancel

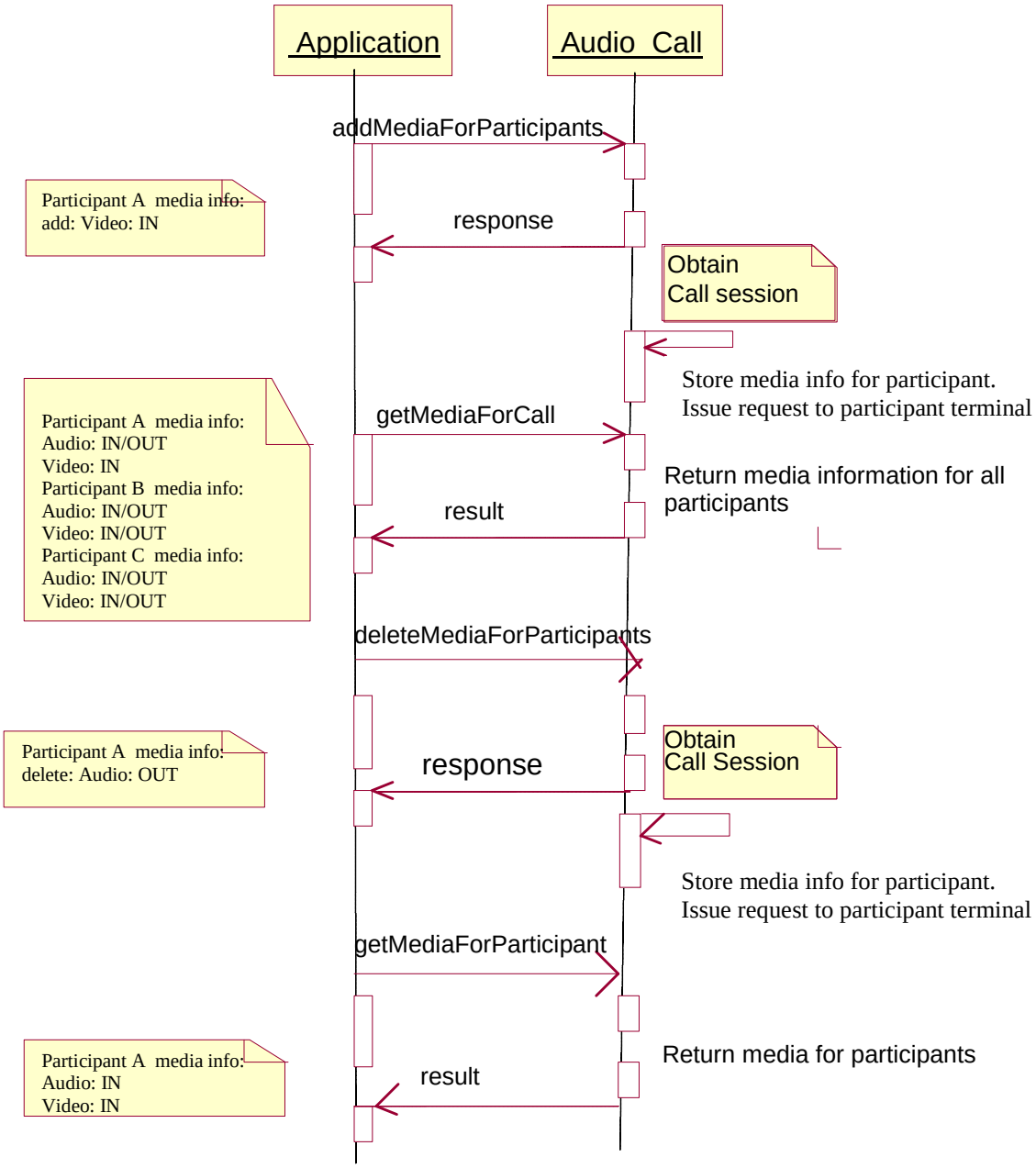
Pattern: Request / response.

The playing of a message may be ended by the requester, as shown.



6.3 Adding and Removing Media

This example shows how to add media, read media information, and remove media for a participant on an existing call.



6.4 Play Media File and Collect Digits from End User

This example shows an application playing a media file and retrieving digits from the end user.

Making call session should precede any operations for media interaction. Call session can be created by TPC, CN, or MMC web services. In this case, the call session for media interaction is created by invoking MakeCallSession request. Collecting digits should be performed by StartPlayAndCollectNotification prior to StartPlayAndCollectInteraction with the same call session identifier generated by MakeCallSession.

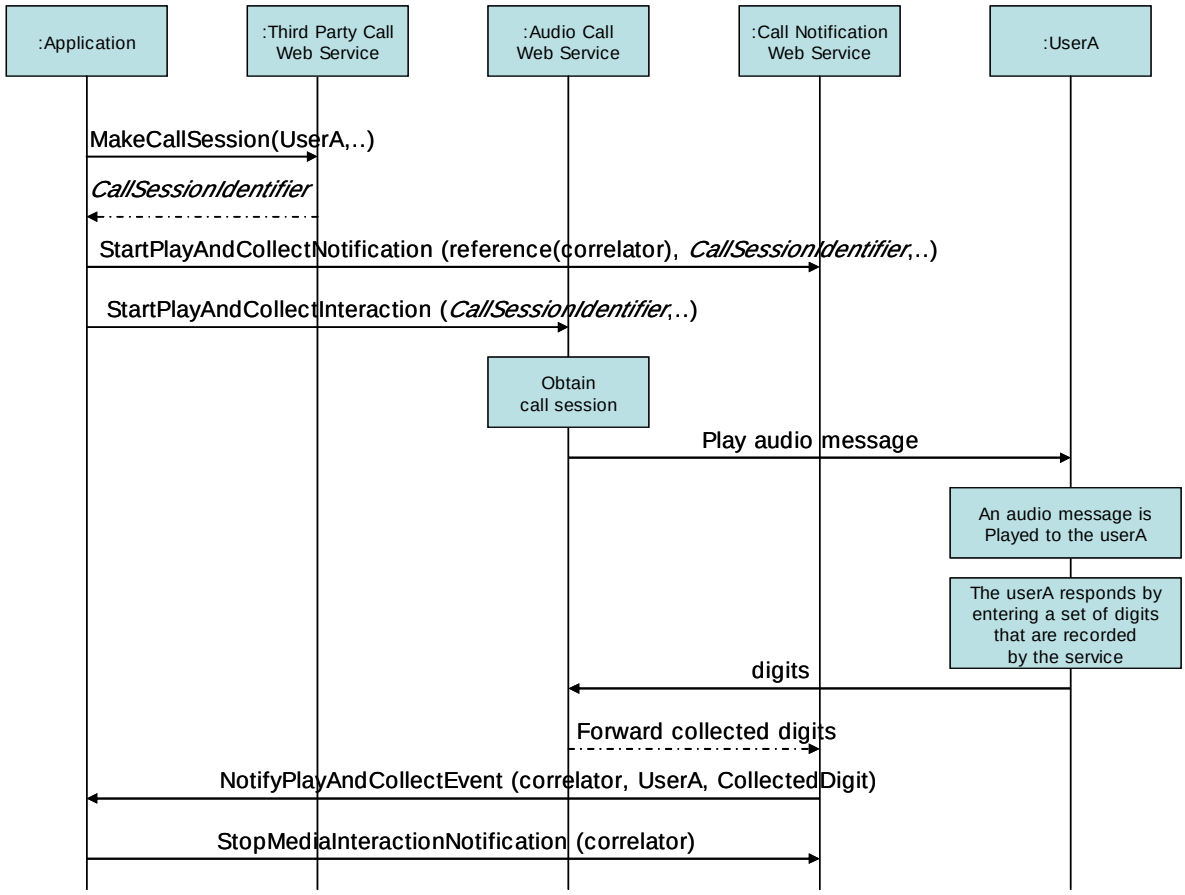


Figure 6.4

6.5 Play Media and Retrieve media from End user

This example shows an application playing a media file, retrieving media from the end user and recording it.

Making call session should precede any operations for media interaction. Call session can be created by TPC, CN, or MMC web services. In this case, the call session for media interaction is created by invoking MakeCallSession request. Recording information should be performed by StartPlayAndRecordNotification prior to StartPlayAndRecordInteraction with the same call session identifier generated by MakeCallSession.

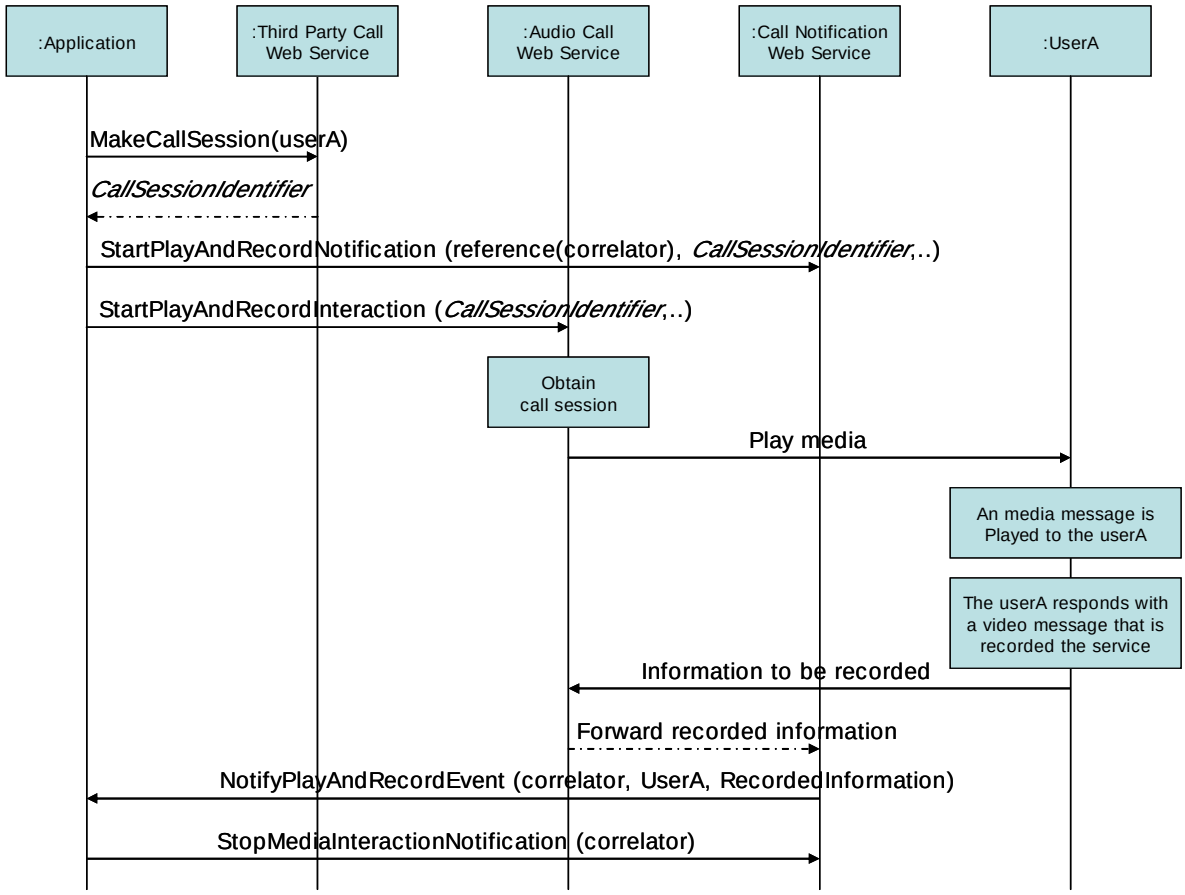


Figure 6.5

7 XML Schema data type definition

7.1 MessageStatus enumeration

Status of the message after play message operation has been invoked.

Element Name	Description
Played	Message has been played
Playing	Message is currently playing
Pending	Message has not yet started playing
Error	An error has occurred, message will not be played

7.2 DigitConfig Structure

Element Name	Element Type	Optional	Description
MaxDigits	xsd:int	Yes	The maximum number of digits that will be collected.
MinDigits	xsd:int	Yes	The minimum number of digits that will be collected. If this isn't achieved, then a default prompt shall be played requesting for more digits to be entered.
InterruptMedia	xsd:boolean	No	Indicates whether the application allows the end user to interrupt, or pause, the prompt.

7.3 RecConfig Structure

Element Name	Element Type	Optional	Description
RecFileLocation	xsd:anyURI	Yes	The location for storing the information recorded from the terminal
MaxRecordingLength	common:TimeMetric	Yes	The maximum time to record the media for

7.4 PlayConfig Structure

Element Name	Element Type	Optional	Description
PlayFileLocation	xsd:anyURI	Yes	The location of the file that will be played to the endpoint, including VoiceXML script location
TextString	xsd:string	Yes	The text to be converted by a Text-To-Speech engine
MessageFormat	AnnouncementFormat	No	The type of announcement prompt to play to the end user
InterruptMedia	xsd:boolean	No	Indicates whether the application allows the end user to interrupt, or pause, the prompt.

7.5 AnnouncementFormat Enumeration

Enumeration value	Description
Audio	Announcement is in Audio format
VoiceXML	Announcement is in VoiceXML format
TextToSpeech	Announcement is in TextToSpeech format
Video	Announcement is in Video format
ApplicationSpecificFormat	Announcement is in an ApplicationSpecificFormat

7.6 MediaMessageStatus structure

Status of the message for each callParticipant after message operation has been invoked.

Element name	Element type	Optional	Description
callParticipant	xsd:anyURI	No	Participant address associated with correlator
status	MessageStatus	No	Current playing status of the participant

7.7 MediaParticipantInfo structure

Name	Type	Optional	Description
CallParticipant	xsd:anyURI	No	Call Participant identifier
MediaInfo	common:MediaInfo[1..unbounded]	No	Information about media currently used by a call participant

8 Web Service interface definition

8.1 Interface: PlayMedia

The PlayMedia interface allows the playing of media messages using different forms of media content, and operations to monitor or cancel requests.

In all operations, a callSessionIdentifier is used to indicate the ongoing call session to which the request applies. If the call session is not valid, the Parlay X web service shall raise an exception, invalid input value. All operations may also list the set of **CallParticipants** to which the requested media shall be provided. The set of participant addresses is restricted to a subset of the valid participant addresses contained within the callSession identified.

8.1.1 Operation: PlayTextMessage

The invocation of **PlayTextMessage** requests to play a text identified by **Text,** to the set of call participants that are provided and contained within the **CallSessionIdentifier** specified. The text will be read through a Text-to-Speech engine, according to the specified **Language**. The invocation returns as soon as the request is received by the system, i.e. the actual call is performed asynchronously. The **Correlator**, returned by the invocation, can be used to identify the request, e.g. to get information on the request status.

This operation is intended to play a message to all of the call participants identified. If no call addresses are specified, the Parlay X Web Service shall play the message to all call participants associated within the **CallSessionIdentifier**. If call participants are specified, then only those call participants specified within the call session shall be played the message. The latter is to allow a message to be played to just one (or some) of the participants, where not all the participants in the call session are to receive the message.

All occurrences of invalid **CallSessionIdentifier** or **CallParticipants** shall result in an invalid input value exception.

8.1.1.1 Input message: PlayTextMessageRequest

Part name	Part type	Optional	Description
CallSessionIdentifier	xsd:string	No	Identifies the call session to which the message shall be played.
CallParticipants	xsd:anyURI [0..unbounded]	Yes	The set of participant addresses contained within the callSession to which the message is to be played
Text	xsd:string	No	Text to process with a Text-To-Speech engine
Language	xsd:string	No	Language of text (ISO string)
Charging	common:ChargingInformation	Yes	Charge to apply for the playing of this message. If charging is not supported then a PolicyException (POL0008) will be returned.

8.1.1.2 Output message: PlayTextMessageResponse

Part name	Part type	Optional	Description
result	xsd:string	No	Correlator for this message for subsequent interactions

8.1.1.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001: Policy error.
- POL0002: Privacy error.
- POL0006: Groups not allowed.
- POL0008: Charging not supported.
- POL0012 - Too many description entries specified.

8.1.2 Operation: PlayAudioMessage

The invocation of **PlayAudioMessage** requests to play an audio file located at **AudioUrl,** to the set of call participants that are provided and contained within the **CallSessionIdentifier** specified. The invocation returns as soon as the request is received by the system, i.e. the actual call is performed asynchronously. The **Correlator**, returned by the invocation, can be used to identify the request, e.g. to get information on the request status.

This operation is intended to play a message to all of the call participants identified. If no call participant addresses are specified, the Parlay X Web Service shall play the message to all call participants associated within the **callSessionIdentifier**. If call participant addresses are specified, then only those addresses specified within the call session shall be played the message. The latter is to allow a message to be played to just one (or some) of the participants, where not all the participants in the call session are to receive the message.

All occurrences of invalid **CallSessionIdentifier** or **CallParticipants** shall result in an invalid input value exception.

8.1.2.1 Input message: PlayAudioMessageRequest

Part name	Part type	Optional	Description
CallSessionIdentifier	xsd:string	No	Identifies the call session to which the message shall be played.
CallParticipants	xsd:anyURI [0..unbounded]	Yes	The set of call participant addresses contained within the callSession to which the message is to be played
AudioUrl	xsd:anyURI	No	Location of audio content to play
Charging	common:ChargingInformation	Yes	Charge to apply for the playing of this message. If charging is not supported then a PolicyException (POL0008) will be returned.

8.1.2.2 Output message: PlayAudioMessageResponse

Part name	Part type	Optional	Description
result	xsd:string	No	Correlator for this message for subsequent interactions

8.1.2.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001: Policy error.
- POL0002: Privacy error.
- POL0006: Groups not allowed.
- POL0008: Charging not supported.
- POL0012 - Too many description entries specified.

8.1.3 Operation: PlayVoiceXmlMessage

The invocation of **PlayVoiceXmlMessage** requests to process VoiceXML content located at **VoiceXmlUrl,** to the set of call participants that are provided and contained within the **CallSessionIdentifier** specified. The invocation returns as soon as the request is received by the system, i.e. the actual call is performed asynchronously. The **Correlator**, returned by the invocation, can be used to identify the request, e.g. to get information on the request status.

This operation is intended to play a message to all of the call participants identified. If no call participant addresses are specified, the Parlay X Web Service shall play the message to all call participants associated within the **CallSessionIdentifier**. If call participant addresses are specified, then only those addresses specified within the call session shall be played the message. The latter is to allow a message to be played to just one (or some) of the participants, where not all the participants in the call session are to receive the message.

All occurrences of invalid **CallSessionIdentifier** or **CallParticipants** shall result in an invalid input value exception.

8.1.3.1 Input message: PlayVoiceXmlMessageRequest

Part name	Part type	Optional	Description
CallSessionIdentifier	xsd:string	No	Identifies the call session to which the message shall be played.
CallParticipants	xsd:anyURI [0..unbounded]	Yes	The set of call participant addresses contained within the callSession to which the message is to be played
VoiceXmlUrl	xsd:anyURI	No	Location of VoiceXML content to process
Charging	common:ChargingInformation	Yes	Charge to apply for the playing of this message. If charging is not supported then a PolicyException (POL0008) will be returned.

8.1.3.2 Output message: PlayVoiceXMLMessageResponse

Part name	Part type	Optional	Description
result	xsd:string	No	Correlator for this message for subsequent interactions

8.1.3.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001: Policy error.
- POL0002: Privacy error.
- POL0006: Groups not allowed.
- POL0008: Charging not supported.
- POL0012 - Too many description entries specified.

8.1.3a Operation: PlayVideoMessage

The invocation of **PlayVideoMessage** requests to play a video stream identified by **Video,** to the set of call participants that are provided and contained within the **CallSessionIdentifier** specified. The invocation returns as soon as the request is received by the system, i.e. the actual call is performed asynchronously. The **Correlator**, returned by the invocation, can be used to identify the request, e.g. to get information on the request status.

This operation is intended to play video to all of the call participants identified. If no call participant addresses are specified, the Parlay X Web Service shall play the video to all call participants associated within the **CallSessionIdentifier**. If call participant addresses are specified, then only those addresses specified within the call session shall be played the message. The latter is to allow a message to be played to just one (or some) of the participants, where not all the participants in the call session are to receive the message.

All occurrences of invalid **CallSessionIdentifier** or **CallParticipants** shall result in an invalid input value exception.

8.1.3a.1 Input message: PlayVideoMessageRequest

Part name	Part type	Optional	Description
CallSessionIdentifier	xsd:string	No	Identifies the call session to which the message shall be played.
CallParticipants	xsd:anyURI [0..unbounded]	Yes	The set of call participant addresses contained within the callSession to which the message is to be played
Video	xsd:anyURI	No	Identifies the video content to be played.
Charging	common:ChargingInformation	Yes	Charge to apply for the playing of this message. If charging is not supported then a PolicyException (POL0008) will be returned.

8.1.3a.2 Output message: PlayVideoMessageResponse

Part name	Part type	Optional	Description
result	xsd:string	No	Correlator for this message for subsequent interactions

8.1.3a.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001: Policy error.
- POL0002: Privacy error.
- POL0006: Groups not allowed.
- POL0008: Charging not supported.
- POL0012 - Too many description entries specified.

8.1.4 Operation: GetMessageStatus

The invocation of **GetMessageStatus** retrieves the current status, **Result**, of a previous request identified by **Correlator**.

8.1.4.1 Input message: GetMessageStatusRequest

Part name	Part type	Optional	Description
Correlator	xsd:string	No	Correlator returned from play operation to check

8.1.4.2 Output message: GetMessageStatusResponse

Part name	Part type	Optional	Description
Result	MediaMessageStatus [1..unbounded]	No	Current playing status for each call participant related to correlator

8.1.4.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001: Policy error.

8.1.5 Operation: EndMessage

The invocation of **EndMessage** cancels/stops a previous request identified by **Correlator**. It returns a **Result**, with the status of the request at the moment of abort.

8.1.5.1 Input message: EndMessageRequest

Part name	Part type	Optional	Description
Correlator	xsd:string	No	Correlator returned from play operation to cancel

8.1.5.2 Output message: EndMessageResponse

Part name	Part type	Optional	Description
Result	MediaMessageStatus [1..unbounded]	No	Status of call Participants related to correlator at the time the endMessage was acted on

8.1.5.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001: Policy error.

8.2 Interface: CaptureMedia

8.2.1 Operation: StartPlayAndCollectInteraction

The application shall invoke this operation in order to play a media file to either one or all call parties on an existing call and collect digits from a call party. The call shall be identified using the **CallSessionIdentifier** part of the request message. If the **CallParticipant** part is provided, then the media interaction is limited to this participant on the call as opposed to the entire call.

The **PlayingConfiguration** part shall contain all the information about the announcement to be played to the participant or call. The **DigitConfiguration** part shall contain the configuration parameters for the digit collection.

The response message shall contain a **MediaIdentifier** part that can be used by the application, if so desired, to interrupt an ongoing media interaction using the **stopMediaInteraction** operation.

8.2.1.1 Input message: StartPlayAndCollectInteractionRequest

Part Name	Part Type	Optional	Description
CallSessionIdentifier	xsd:string	No	Identifies the call session for the media interaction.
CallParticipant	xsd:anyURI	Yes	If this is present, the media interaction is with this call participant only. If this is not present, the media interaction is with all participants on the call
PlayingConfiguration	PlayConfig	No	Configuration parameters related to the playing of a media file
DigitConfiguration	DigitConfig	No	Configuration parameters related to digit collection

8.2.1.2 Output message: StartPlayAndCollectInteractionResponse

Part Name	Part Type	Optional	Description
result	xsd:string	No	An identifier that uniquely defines the media interaction

8.2.1.3 Referenced Faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001 - Service error.
- SVC0002 - Invalid input value.
- SVC0004 - No valid addresses

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001 - Policy error.
- POL0002 – Privacy error

8.2.2 Operation: StartPlayAndRecordInteraction

The application shall invoke this operation in order to play a media file to either one or all call parties on an existing call and record information (media) from a call party. The call shall be identified using the **CallSessionIdentifier** part of the request message. If the **CallParticipant** part is provided, then the media interaction is limited to this participant on the call as opposed to the entire call.

The **PlayingConfiguration** part contains all the information about the announcement to be played to the participant or call. The **RecordingConfiguration** part shall contain the configuration parameters for the media recording.

The response message shall contain a **MediaIdentifier** part that can be used by the application, if so desired, to interrupt an ongoing media interaction using the **stopMediaInteraction** operation.

8.2.2.1 Input message: StartPlayAndRecordInteractionRequest

Part Name	Part Type	Optional	Description
CallSessionIdentifier	xsd:string	No	Identifies the call session for the media interaction.
CallParticipant	xsd:anyURI	Yes	If this is present, the media interaction is with this call participant only. If this is not present, the media interaction is with all participants on the call.
PlayingConfiguration	PlayConfig	No	Configuration parametersrelated to the playing of a media file
RecordingConfiguration	RecConfig	No	Configuration parameters related to media recording

8.2.2.2 Output message: StartPlayAndRecordInteractionResponse

Part Name	Part Type	Optional	Description
result	xsd:string	No	An identifier that uniquely defines the media interaction

8.2.2.3 Referenced Faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001 - Service error.
- SVC0002 - Invalid input value.
- SVC0004 - No valid addresses

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001 - Policy error.
- POL0002 – Privacy error

8.2.3 Operation: StopMediaInteraction

This operation shall stop an ongoing media interaction. The **MediaIdentifier** part provided by the application in the request message shall contain the value returned in the response message of the associated startPlayAndCollectInteraction or startPlayAndRecordInteraction operation.

The stopMediaInteraction operation is only required in order to interrupt an ongoing interaction such as on hold music. Many interactions have a natural endpoint (e.g. collecting digits) and in this case the stopMediaInteraction is not required.

8.2.3.1 Input message: StopMediaInteractionRequest

Part Name	Part Type	Optional	Description
MediaIdentifier	xsd:string	No	An identifier that uniquely defines the media interaction

8.2.3.2 Output message: StopMediaInteractionResponse

Part Name	Part Type	Optional	Description
None			

8.2.3.3 Referenced Faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001 - Service error.
- SVC0002 - Invalid input value.

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001 - Policy error.

8.3 Interface: Multimedia

The Multimedia interface can be used by an application for dynamically managing the media types for the participants involved in the call.

8.3.1 Operation: AddMediaForParticipants

The invocation of **addMediaForParticipants** requests to add **media** type(s) to the media set used by all of the call participants identified. If no call participant addresses are specified, the Audio Call Web Service shall request addition of the media type(s) specified to all call participants in the call session (i.e. associated with the **CallSessionIdentifier)**. If call participants are specified, then only those call participants explicitly specified shall have the media type(s) added. The latter is to allow media type(s) to be added or changed for just one (or some) of the participants, where not all the participants in the call session are to have exactly the same set of media types.

The added media type has to be compatible with the the set of media types supported by the participant"s device, otherwise the operation will fail. The resultant media details can be retrieved using **getMediaForParticipant** or **getMediaForCall.** If a participant has already the requested media type and direction, the operation shall fail and throw ServiceException SVC0290.

8.3.1.1 Input message: addMediaForParticipantsRequest

Part name	Part type	Optional	Description
CallSessionIdentifier	xsd:string	No	Call session identifier. It identifies the existing call session or call conference. This must be a non-null value as it identifies a pre-existing call (or conference) in the network
CallParticipants	xsd:anyURI [0..unbounded]	Yes	Call participant(s). The set of participant addresses contained within the callSession to which the add media stream is to apply.
MediaInfo	common: MediaInfo [1..unbounded]	No	It identifies the media type(s) the participant(s) is requested to be able to receive/send and the desired direction of the media stream(s), i.e. incoming, outgoing or bidirectional. At least one media type shall be specified as desired.

8.3.1.2 Output message: addMediaForParticipantsResponse

Part name	Part type	Optional	Description
None			

8.3.1.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.
- SVC0290: Duplicate media type

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001: Policy error.
- POL0011: Media type not supported

8.3.2 Operation: DeleteMediaForParticipants

The invocation of **deleteMediaForParticipants** requests to delete **media** types from the media set used by all the call participants identified. If no call participant addresses are specified, the requested media type(s) for all call participants in the call session (i.e. associated with the **CallSessionIdentifier)** shall be removed. If call participants are specified, then only those call participants explicit specified shall have the media type(s) removed. The latter is to allow media type(s) to be removed for just one (or some) of the call participants, where not all the call participants in the call are to have exact the same set of media types. The resultant media details can be retrieved using **getMedia ForParticipant** or **getMediaForCall**

If a call participant does not have the requested media type, the operation shall fail and throw ServiceException SVC0291.

8.3.2.1 Input message: deleteMediaForParticipantsRequest

Part name	Part type	Optional	Description
CallSessionIdentifier	xsd:string	No	Call session identifier. It identifies the existing call session or call conference. This must be a non-null value as it identifies a pre-existing call (or conference) in the network
CallParticipants	xsd:anyURI [0..unbounded]	Yes	Call participant(s). The set of participant addresses contained within the callSession to which the delete media type(s) is to apply.
Media	common: Media [1..unbounded]	No	It identifies the media type(s) not to be used any more by the participant(s). At least one media type shall be specified as desired to remove.

8.3.2.2 Output message: deleteMediaForParticipantResponse

Part name	Part type	Optional	Description
None			

8.3.2.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.
- SVC0291: Media stream does not match

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001: Policy error.

8.3.3 Operation: GetMediaForParticipant

The invocation of **getMediaForParticipant** requests information concerning the current media status of a single participant of the multi-media call (identified by **CallSessionIdentifier**)

8.3.3.1 Input message: getMediaForParticipantRequest

Part name	Part type	Optional	Description
CallSessionIdentifier	xsd:string	No	Call session identifier. It identifies the existing call session or call conference. This must be a non-null value as it identifies a pre-existing call (or conference) in the network
CallParticipant	xsd:anyURI	No	Identifies a specific call participant address within the call session

8.3.3.2 Output message: getMediaForParticipantResponse

Part name	Part type	Optional	Description
result	common: MediaInfo[1..unbounded]	No	Array containing media status information for the requested call participant

8.3.3.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001: Policy error.

8.3.4 Operation: GetMediaForCall

The invocation of **getMediaForCall** requests information concerning the current media status of each participant of the multi-media call identified by **CallSessionIdentifier.**

8.3.4.1 Input message: getMediaForCallRequest

Part name	Part type	Optional	Description
CallSessionIdentifier	xsd:string	No	Call session identifier. It identifies the existing call session or call conference. This must be a non-null value as it identifies a pre-existing call (or conference) in the network

8.3.4.2 Output message: getMediaForCallResponse

Part name	Part type	Optional	Description
result	MediaParticipantInfo [1..unbounded]	No	Array containing media status information for each call participant

8.3.4.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.

PolicyException from 3GPP TS 29.199-1 [6]:

- POL0001: Policy error.

9 Fault definitions

9.1 ServiceException

9.1.1 SVC0290: Duplicate media stream

Name	Description
messageId	SVC0290
text	Duplicate media stream
variables	None

9.1.2 SVC0291: Media stream does not match

Name	Description
messageId	SVC0291
text	Media stream does not match type specified
variables	None

10 Service policies

Name	Type	Description
AudioContentAvailable	xsd:boolean	Indicates whether the service accepts audio content for playing with an audio player.
AudioFormatsSupported	xsd:string	Comma separated list of audio formats supported (e.g. WAV, MP3, AU)
ChargingSupported	xsd:boolean	Indicates whether charging is supported for the play operations
DigitCollectionAvailable	xsd:boolean	Service accepts digit collection input from the end user
MinDigits	xsd:int	The minimum number of digits supported for interaction with the end-user
MaxDigits	xsd:int	The maximum number of digits supported for interaction with the end-user
MaxRecordingLength	common:TimeMetric	Time interval indicating the maximum length of time end-user input will be recorded for.
MultimediaSupported	xsd:boolean	Indicates whether multimedia is supported and whether an application can change the media types used in a call.
RecordMessageAvailable	xsd:boolean	Service accepts recorded message input from the end user
StatusRetentionTime	common:TimeMetric	Time interval for which status is retained for after a message is played or an error occurs.
TextToSpeechAvailable	xsd: boolean	Indicates whether the service accepts text as an input for processing with a Text-To-Speech engine.
VideoAvailable	xsd: boolean	Indicates whether the service accepts video content for streaming.
VoiceXMLAvailable	xsd:boolean	Indicates whether the service accepts VoiceXML as an input for processing with a VoiceXML browser.
MaximumDescriptions	xsd:int	Maximum number of Descriptions that can be charged simultaneously

Annex A (normative): WSDL for Audio call

The document/literal WSDL representation of this interface specification is compliant to 3GPP TS 29.199-1 [6] and is contained in text files:

- parlayx_audio_call_capture_media_interface_4_0.wsdl
- parlayx_audio_call_capture_media_service_4_0.wsdl
- parlayx_audio_call_multimedia_interface_4_0.wsdl
- parlayx_audio_call_multimedia_service_4_0.wsdl
- parlayx_audio_call_play_media_interface_4_0.wsdl
- parlayx_audio_call_play_media_service_4_0.wsdl
- parlayx_audio_call_types_4_0.xsd

which accompany the present document.

The WSDL files have been verified using the following files:

- 11_wsdl2Java_axis-1_4.bat
- 11_wsdl2Java_axis2-1_4_1.bat

which accompany the present document.

Annex B (informative): Description of Parlay X Web Services Part 11: Audio call for 3GPP2 cdma2000 networks

This annex is intended to define the OSA Parlay X Web Services Stage 3 interface definitions and it provides the complete OSA specifications. It is an extension of OSA Parlay X Web Services specifications capabilities to enable operation in cdma2000 systems environment. They are in alignment with 3GPP2 Stage 1 requirements and Stage 2 architecture defined in:

[1] 3GPP2 X.S0011-D: 'cdma2000 Wireless IP Network Standard ", Version 1.1

[2] 3GPP2 S.R0037-0: "IP Network Architecture Model for cdma2000 Spread Spectrum Systems", Version 3.0

[3] 3GPP2 X.S0013-A: "All-IP Core Network Multimedia Domain"

These requirements are expressed as additions to and/or exclusions from the 3GPP Release 8 specification.
The information given here is to be used by developers in 3GPP2 cdma2000 network architecture to interpret the 3GPP OSA specifications.

B.1 General Exceptions

The terms 3GPP and UMTS are not applicable for the cdma2000 family of standards. Nevertheless these terms are used (3GPP TR 21.905) mostly in the broader sense of "3G Wireless System". If not stated otherwise there are no additions or exclusions required.

CAMEL mappings are not applicable for cdma2000 systems.

B.2 Specific Exceptions

B.2.1 Clause 1: Scope

There are no additions or exclusions.

B.2.2 Clause 2: References

There are no additions or exclusions.

B.2.3 Clause 3: Definitions and abbreviations

There are no additions or exclusions.

B.2.4 Clause 4: Detailed service description

There are no additions or exclusions.

B.2.5 Clause 5: Namespaces

There are no additions or exclusions.

B.2.6 Clause 6: Sequence diagrams

There are no additions or exclusions.

B.2.7 Clause 7: XML Schema data type definition

There are no additions or exclusions.

B.2.8 Clause 8: Web Service interface definition

There are no additions or exclusions.

B.2.9 Clause 9: Fault definitions

There are no additions or exclusions.

B.2.10 Clause 10: Service policies

There are no additions or exclusions.

B.2.11 Annex A (normative): WSDL for Audio call

There are no additions or exclusions.

Annex C (informative): Change history

Change history								
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Cat**	**Old**	**New**
Dec 2006	CT_34	CP-060605	0004	--	Add Extended Call Control for Parlay X	C	6.3.0	7.0.0
Mar 2007	CT_35	CP-070045	0006	--	Add OSA Parlay Web Services support for 3GPP2 networks	A	7.0.0	7.1.0
Mar 2007	CT_35	CP-070048	0007	--	Correct interface namespace	F	7.0.0	7.1.0
Mar 2007	CT_35	CP-070048	0008	--	Modify the result of GetMessageStatus and EndMessage operation	F	7.0.0	7.1.0
Mar 2007	CT_35	CP-070269	0009	2	Add support for multimedia in AudioCall	B	7.0.0	7.1.0
Mar 2007	CT_35	CP-070269	0010	2	Add support for Media Interaction	B	7.0.0	7.1.0
Mar 2007	--	--	--	--	Editorial: Aligned 5 Namespaces	--	7.1.0	7.1.1
Jun 2007	CT_36	CP-070346	0012	--	Refine Audio Call Web Service	F	7.1.1	7.2.0
Jun 2007	CT_36	CP-070346	0013	--	Correction to Audio Call Web Service	F	7.1.1	7.2.0
Sep 2007	CT_37	CP-070641	0014	--	Modify the service scenarios for Audio Call web service	C	7.2.0	8.0.0
Sep 2009	CT_45	CP-090599	0015	--	Completion of Parlay X Audio call for Release 8	F	8.0.0	8.1.0

History

Document history		
V8.0.0	February 2009	Publication
V8.1.0	October 2009	Publication