

ETSI TS 129 199-11 V6.4.0 (2007-03)

Technical Specification

**Universal Mobile Telecommunications System (UMTS);
Open Service Access (OSA);
Parlay X web services;
Part 11: Audio call
(3GPP TS 29.199-11 version 6.4.0 Release 6)**



Reference

RTS/TSGC-0529199-11v640

Keywords

UMTS

ETSI

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Foreword

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

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>.

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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

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- 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".

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 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 Audio Call service provides a flexible way to provide vocal message delivery. The interface is very simple, not requiring the developer to manage the creation of the call nor the interactions with the call to deliver the voice message.

There are three mechanisms which may be utilized for the vocal 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.

The service may provide one, two or all three mechanisms, with the service policies providing the mechanism for determining which are available.

5 Namespaces

The data types are defined in the namespace:

http://www.csapi.org/schema/parlayx/audio_call/v2_1

The AudioCall interface uses the namespace:

http://www.csapi.org/wsd/parlayx/audio_call/v2_1

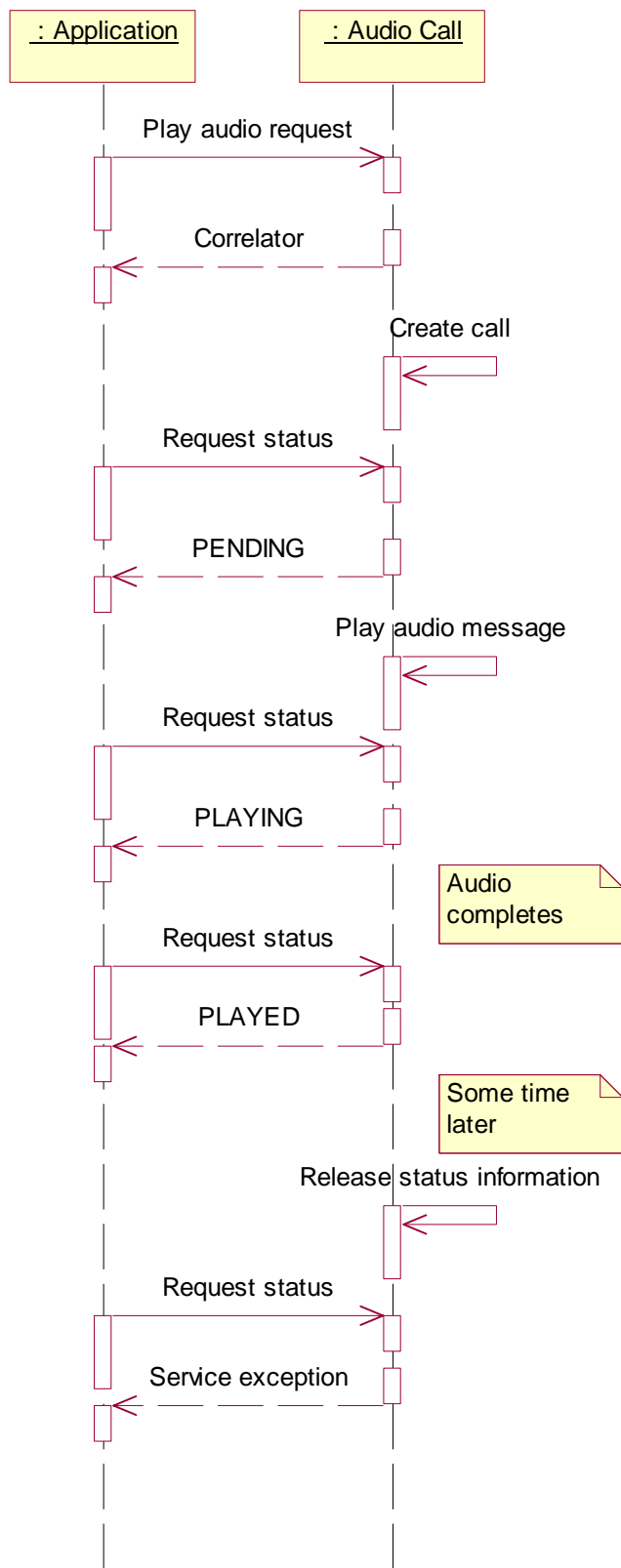
The 'xsd' namespace is used in the present document to refer to the XML Schema data types defined in XML Schema [5]. The use of the name 'xsd' is not semantically significant.

6 Sequence diagrams

6.1 Play audio and check status

Pattern: Request / response.

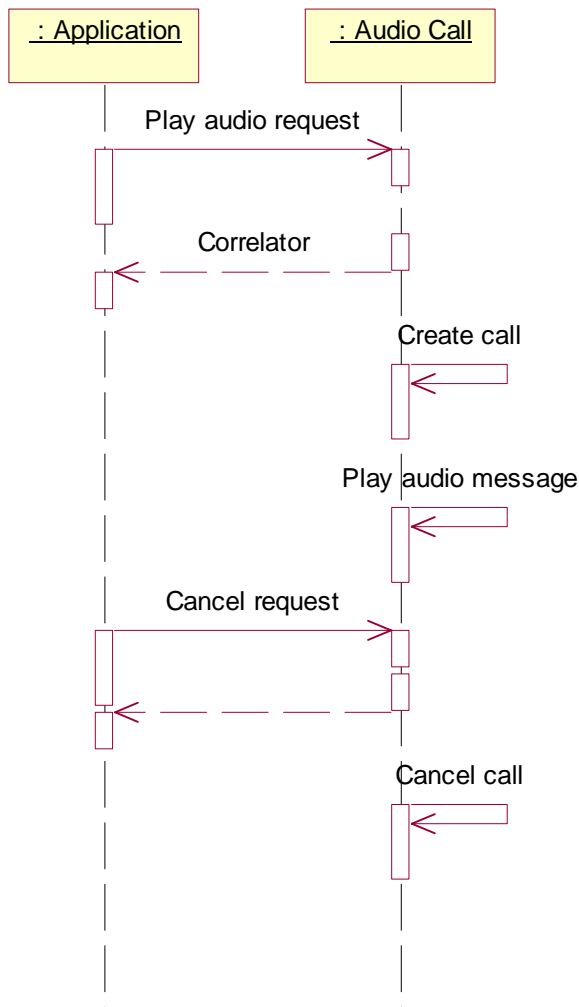
This example shows an audio message being played, and the different responses to status requests that occur at different phases. Note that the last response, a service exception, reflects the transient nature of results, and that these results will expire.



6.2 Play audio and cancel

Pattern: Request / response.

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



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 |

8 Web Service interface definition

8.1 Interface: PlayAudio

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

In all operations, the **Address** is restricted to the use of 'tel:' and 'sip:' URIs as specified in 3GPP TS 29.199-1 [6], and wildcards are not permitted in these URIs.

8.1.1 Operation: PlayTextMessage

The invocation of **PlayTextMessage** requests to set up a call to the user identified by **Address** and play a text identified by **Text**. 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 a single terminal. The URI provided is for a single terminal, not a group URI. If a group URI is provided, a PolicyException will be returned to the application.

8.1.1.1 Input message: PlayTextMessageRequest

| Part name | Part type | Optional | Description |
|-----------|----------------------------|----------|--|
| Address | xsd:anyURI | No | Address to which 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.

8.1.2 Operation: PlayAudioMessage

The invocation of **playAudioMessage** requests to set up a call to the user identified by **Address** and play an audio file located at **AudioUrl**. 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 a single terminal. The URI provided is for a single terminal, not a group URI. If a group URI is provided, a **PolicyException** will be returned to the application.

8.1.2.1 Input message: PlayAudioMessageRequest

| Part name | Part type | Optional | Description |
|-----------|----------------------------|----------|---|
| Address | xsd:anyURI | No | Address to which 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.

8.1.3 Operation: PlayVoiceXmlMessage

The invocation of **PlayVoiceXmlMessage** requests to set up a call to the user identified by **Address** and process VoiceXML content located at **VoiceXmlUrl**. 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 a single terminal. The URI provided is for a single terminal, not a group URI. If a group URI is provided, a **PolicyException** will be returned to the application.

8.1.3.1 Input message: PlayVoiceXmlMessageRequest

| Part name | Part type | Optional | Description |
|-------------|----------------------------|----------|---|
| Address | xsd:anyURI | No | Address to which 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.

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 | MessageStatus | No | Current playing status |

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 | MessageStatus | No | Status 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.

9 Fault definitions

No new fault definitions for this service.

10 Service policies

| Name | Type | Description |
|-----------------------|-------------|--|
| TextToSpeechAvailable | xsd:boolean | Service accepts text as an input for processing with a Text-To-Speech engine. |
| AudioContentAvailable | xsd:boolean | Services accepts audio content for playing with an audio player. |
| VoiceXMLAvailable | xsd:boolean | Service accepts VoiceXML as an input for processing with a VoiceXML browser. |
| StatusRetainTime | xsd:int | Number of seconds status is retained for after a message is played or an error occurs. |
| AudioFormatsSupported | xsd:string | Comma separated list of audio formats supported (e.g. WAV, MP3, AU) |
| ChargingSupported | xsd:boolean | Is charging supported for the play operations |

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 (contained in archive 29199-11-640-doclit.zip) which accompanies 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 6 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 |
| Sep 2004 | CN_25 | NP-040360 | -- | -- | Draft v100 submitted to TSG CN#25 for Approval. | -- | 1.0.0 | 6.0.0 |
| Jun 2005 | CT_28 | CP-050221 | 0001 | -- | Optionals for Part 11 | F | 6.0.0 | 6.1.0 |
| Dec 2005 | CT_30 | CP-050576 | 0002 | -- | Inconsistent part naming in PX response messages | F | 6.1.0 | 6.2.0 |
| Jun 2006 | CT_32 | CP-060195 | 0003 | -- | Change reference to OSA Stage 2 from 23.127 to 23.198 | F | 6.2.0 | 6.3.0 |
| Mar 2007 | CT_35 | CP-070045 | 0005 | -- | Add OSA Parlay Web Services support for 3GPP2 networks | F | 6.3.0 | 6.4.0 |
| | | | | | | | | |

History

| Document history | | |
|-------------------------|---------------|-------------|
| V6.0.0 | January 2005 | Publication |
| V6.1.0 | June 2005 | Publication |
| V6.2.0 | December 2005 | Publication |
| V6.3.0 | June 2006 | Publication |
| V6.4.0 | March 2007 | Publication |