RESTful bindings for Parlay X Web Services – Third Party Call

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Open Mobile Alliance

OMA-TS-ParlayREST_ThirdPartyCall-V1_0-20110111-C

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1. Scope

This specification defines a RESTful Third Party Call API using an HTTP protocol binding, based on the similar API defined in [3GPP 29.199-02].

2. References

2.1 Normative References

[3GPP 29.199-02] 3GPP Technical Specification, "Open Service Access (OSA); Parlay X Web Services; Part 2: Third Party Call (Release 8)", URL:http://www.3gpp.org/

[OMA_REST_TS_Common] "Common definitions and specifications for OMA REST interfaces", Open Mobile Alliance™, OMA-TS_REST_Common-V1_0, URL: http://www.openmobilealliance.org/

[REST_SUP_3PC] "RESTful bindings for Parlay X Web Services – XML Schema for Third Party Call", Open Mobile Alliance™, OMA-SUP-rest_thirdpartycall-V1_0, URL:http://www.openmobilealliance.org/

[REST_TS_Common] "RESTful bindings for Parlay X Web Services – Common", Open Mobile Alliance™, OMA-TS-ParlayREST_Common-V1_1, URL:http://www.openmobilealliance.org/

[RFC2119] "Key words for use in RFCs to Indicate Requirement Levels", S. Bradner, March 1997, URL:http://www.ietf.org/rfc/rfc2119.txt

[RFC2616] "Hypertext Transfer Protocol -- HTTP/1.1", R. Fielding et. al, January 1999, URL:http://www.ietf.org/rfc/rfc2616.txt

[RFC4627] "The application/json Media Type for JavaScript Object Notation (JSON)", D. Crockford, July 2006, URL: http://www.ietf.org/rfc/rfc4627.txt

[SCRRULES] "SCR Rules and Procedures", Open Mobile Alliance™, OMA-ORG-SCR_Rules_and_Procedures, URL:http://www.openmobilealliance.org/

[W3C-URLENC] W3C HTML 2.0 Specification, form-urlencoded Media Type, URL: http://www.w3.org/MarkUp/html-spec/html-spec_8.html#SEC8.2.1

2.2 Informative References

[OMADICT] "Dictionary for OMA Specifications", Version 2.8, Open Mobile Alliance™, OMA-ORG-Dictionary-V2_8, URL:http://www.openmobilealliance.org/

[REST_TS_AudioCall] "RESTful bindings for Parlay X Web Services – Audio Call", Open Mobile Alliance™, OMA-TS-ParlayREST_AudioCall-V1_0, URL:http://www.openmobilealliance.org/

[REST_TS_CallNotif] "RESTful bindings for Parlay X Web Services – Call Notification", Open Mobile Alliance™, OMA-TS-ParlayREST_CallNotification-V1_0, URL:http://www.openmobilealliance.org/

[REST_WP] "White Paper on Guidelines for REST API specifications", Open Mobile Alliance™, OMA-WP-Guidelines_for_REST_API_specifications, URL:http://www.openmobilealliance.org/

3. Terminology and Conventions

3.1 Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

All sections and appendixes, except “Scope” and “Introduction”, are normative, unless they are explicitly indicated to be informative.

3.2 Definitions

For the purpose of this TS, all definitions from the OMA Dictionary apply [OMADICT].

3.3 Abbreviations

API	Application Programming Interface
HTTP	HyperText Transfer Protocol
JSON	JavaScript Object Notation
MIME	Multipurpose Internet Mail Extensions
OMA	Open Mobile Alliance
REST	REpresentational State Transfer
SCR	Static Conformance Requirements
TS	Technical Specification
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
XML	eXtensible Markup Language
XSD	XML Schema Definition

4. Introduction

The ParlayREST Technical Specification for Third Party Call contains the HTTP protocol binding for the Parlay X Third Party Call Web Services specification, using the REST architectural style. The specification provides resource definitions, the HTTP verbs applicable for each of these resources, and the element data structures, as well as support material including flow diagrams and examples using the various supported message body formats (i.e. XML, JSON, and form-urlencoding).

4.1 Version 1.0

Version 1.0 of the Third Party Call ParlayREST API specification supports the following operations:

- Make a call session between calling participant and a number of called participants. Compared to the Parlay X baseline, this specification adds a few optional parameters that include the option to specify announcements to be played to the participants on joining the call, and to provide an endpoint on which the Client can be notified of call events such as a participant joining or leaving the call. Also, the limitation of the maximum number of participants to two on call session creation is lifted.
- Obtain information of all call sessions.
- Obtain information of all participants of a call session.
- Obtain information of a participant in a call session.
- Obtain information of a call session.
- Add a participant into a call session.
- Transfer a participant from source call session to destination call session.
- Remove a participant from a call session.
- Terminate a call session.

5. Third Party Call API definition

This section is organized to support a comprehensive understanding of the Third Party Call API design. It specifies the definition of all resources, definition of all data structures, and definitions of all operations permitted on the specified resources.

Common data types, naming conventions, fault definitions and namespaces are defined in [REST_TS_Common] and [OMA_REST_TS_Common].

The remainder of this document is structured as follows:

Section 5 starts with a table listing all the resources (and their URL) used by this API, along with the data structure and the supported HTTP verbs (section 5.1). What follows are the data structures (section 5.2). A sample of typical use cases is included in section 5.3, described as high level flow diagrams.

The remaining subsections in section 5 contain the detailed specification for each of the resources. Each such subsection defines the resource, the request URI variables that are common for all HTTP commands, the possible HTTP response codes, and the supported HTTP verbs. For each supported HTTP verb, a description of the functionality is provided, along with an example of a request and an example of a response. For each unsupported HTTP verb, the returned HTTP error status is specified, as well as what to return in the Allow header.

All examples in section 5 use XML as the format for the message body. Form-urlencoded examples are provided in Appendix C, while JSON examples are provided in Appendix D. Appendix B provides the Static Conformance Requirements (SCR). Finally, Appendix E lists the Parlay X equivalent method for each supported ParlayREST resource and method combination, where applicable.

For requests and responses that have a body, the following applies: in the requests received, the server SHALL support JSON and XML encoding of the parameters in the body, and MAY support www-form-urlencoded parameters in the body. The Server SHALL return either JSON or XML encoded parameters in the response body, according to the result of the content type negotiation as specified in [OMA_REST_TS_Common]. In notifications to the Client, the server SHALL use either XML or JSON encoding, depending on which format the client has specified in the related subscription.

Note: Throughout this document client and application can be used interchangeably.

5.1 Resources Summary

This section summarizes all the resources used by the Third Party Call API.

The figure below visualizes the resource structure defined by this specification. Note that those nodes in the resource tree which have associated HTTP methods defined in this specification are depicted by solid boxes.

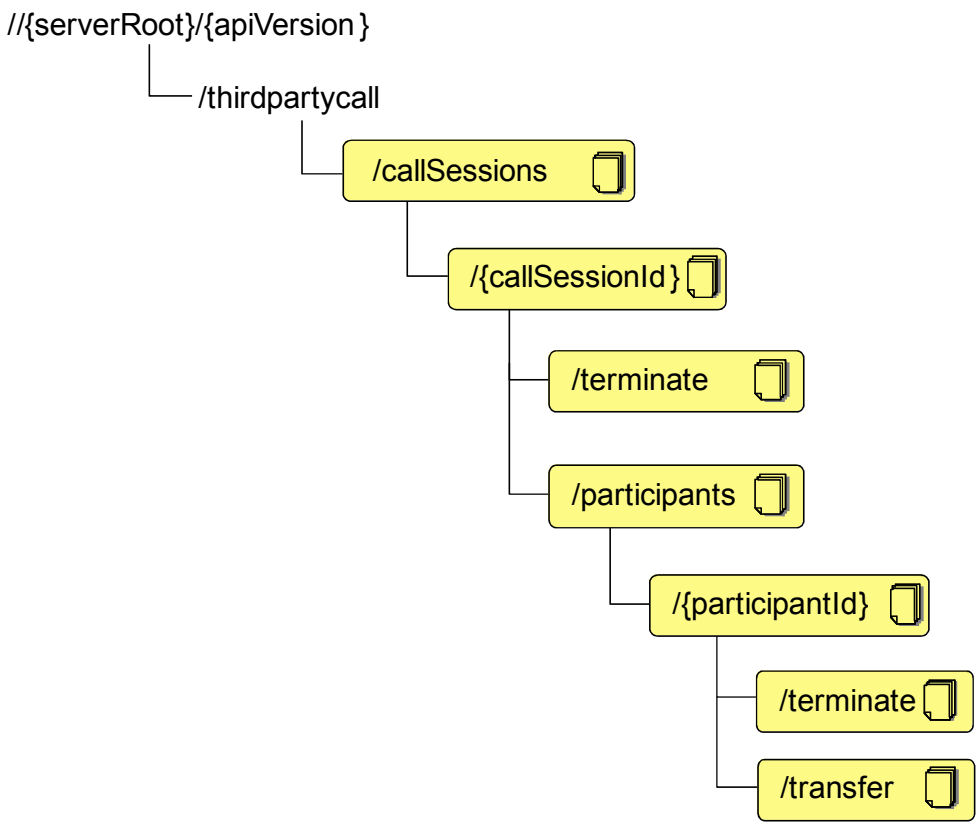

Figure 1 Resource structure defined by this specification

The following tables give a detailed overview of the resources defined in this specification, the data type of their representation and the allowed HTTP methods.

Purpose: Handling of call sessions

Resource	URL Base URL: http://{serverRoot}/{apiVersion}/thirdpartycall	Data Structures	HTTP verbs			
			GET	PUT	POST	DELETE
All Call Sessions	callSessions	CallSessionList (used for GET) CallSessionInformation (used for POST) common:ResourceReference (OPTIONAL alternative for POST response)	Get a list of all call sessions	no	Create new call session	no

Resource	URL Base URL: http://{serverRoot}/{apiVersion}/thirdpartycall	Data Structures	HTTP verbs			
			GET	PUT	POST	DELETE
Individual Call Session	callSessions/{callSessionId}	CallSessionInformation	Get information of an individual call session	no	no	Terminate call session
Call Session Termination	callSessions/{callSessionId}/terminate	TerminationParameters	no	no	Terminate call session and keep session information on server	no
All Participants of a Call Session	callSessions/{callSessionId}/participants	CallParticipantList (used for GET) CallParticipantInformation (used for POST) common:ResourceReference (OPTIONAL alternative for POST response)	Get a list of participants of a call session	no	Add participant to call session	no
Individual Call Session Participant	callSessions/{callSessionId}/participants/{participantId}	CallParticipantInformation	Get information of an individual call session participant	no	no	Remove participant from call
Call Session Participant Transfer	callSessions/{callSessionId}/participants/{participantId}/transfer	TransferParameters (used for POST request) common:ResourceReference (used for POST response)	no	no	Transfer a participant from one call session to another	no

Resource	URL Base URL: http://{serverRoot}/{apiVersion}/thirdpartycall	Data Structures	HTTP verbs			
			GET	PUT	POST	DELETE
Call Session Participant Termination	callSessions/{callSessionId}/participants/{participantId}/terminate	TerminationParameters	no	no	Remove participant from call, keep a trace of participation	no

5.2 Third Party Call ParlayREST API Data Structures

The namespace for the Third Party Call data types is:

urn:oma:xml:rest:thirdpartycall:1

The 'xsd' namespace is used in the present document to refer to the XML Schema data types defined in XML Schema [XMLSchema1, XMLSchema2]. The 'common' namespace is used in the present document to refer to the data types defined in [REST_TS_Common]. The use of the names 'xsd' and ‘common’ is not semantically significant.

Note that more data types related to the Third Party Call API are defined in [REST_TS_Common], including CallSessionInformation and CallParticipantInformation.

5.2.1 Type: CallSessionList

This type describes a list of call sessions.

Element	Type	Optional	Description
callSession	CallSessionInformation [0..unbounded]	Yes	Array of call sessions.
resourceURL	xsd:anyURI	No	Self referring URL

A root element named callSessionList of type CallSessionList is allowed in request and/or response bodies.

5.2.2 Type: CallSessionInformation

This type is declared in [REST_TS_Common] and describes a call session.

A root element named callSessionInformation of type common:CallSessionInformation is allowed in request and/or response bodies, and is declared within the namespace urn:oma:xml:rest:thirdpartycall:1 in [REST_SUP_3PC].

5.2.3 Type: CallParticipantList

This type describes a list of call participants.

Element	Type	Optional	Description
Participant	CallParticipantInformation [1..unbounded]	No	Array of call participants.
resourceURL	xsd:anyURI	No	Self referring URL

A root element named callParticipantList of type CallParticipantList is allowed in request and/or response bodies.

5.2.4 Type: CallParticipantInformation

This type is declared in [REST_TS_Common] and describes a call participant.

A root element named callParticipantInformation of type common:CallParticipantInformation is allowed in request and/or response bodies, and is declared within the namespace urn:oma:xml:rest:thirdpartycall:1 in [REST_SUP_3PC].

5.2.5 Type: TransferParameters

This type defines the set of parameters for the call participant transfer request.

Element	Type	Optional	Description
destinationCallSession	xsd:anyURI	No	The URI of the call session to which the participant is to be transferred.

A root element named transferParameters of type TransferParameters is allowed in request bodies.

5.2.6 Type: TerminationParameters

This type defines the set of parameters for the call termination request.

Element	Type	Optional	Description
(empty)			In the current version of this specification, this type is empty.

A root element named terminationParameters of type TerminationParameters is allowed in request bodies.

5.2.7 Values of the Link "rel" attribute

The "rel" attribute of the Link element (see [REST_TS_Common]) is a free string set by the server implementation, to indicate a relationship between the current resource and an external resource. The following are possible strings, indicating resources that are defined in this specification which the "link" element can point to (list is non-exhaustive, and can be extended):

- CallSessionList
- CallSessionInformation
- CallParticipantList
- CallParticipantInformation

These values indicate the kind of resource that the link points to.

5.3 Sequence Diagrams

5.3.1 Creating and manipulating a call session

This figure below shows a scenario for creating and manipulating a call session.

The resources:

- In order to create a call session with one or more participants, create a new resource under **http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions**
- In order to get information about an ongoing call session, read the resource **http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}**
- In order to add a participant to an ongoing call session, create a new resource under **http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/participants**
- In order to get information about the participants of a call session and their status, read the resource **http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/participants**
- In order to get information about a particular participant of a call session, read the resource **http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/participants/{participantId}**
- In order to remove a participant from an ongoing session,

  - if it is *not* intended to access the resource representing this participant's participation in the call after the participant's removal, delete the resource **http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/participants/{participantId}**
  - if it *is* intended to access information about this participant's participation in the call session after the participant's removal, use the POST method to submit a termination request to the resource **http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/participants/{participantId}/terminate**

- In order to make a call transfer (which effectively is to transfer a participant from an ongoing session to another one), use the POST method to submit the resourceURL identifying the target session to the resource below: **http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/participants/{participantId}/transfer**
- In order to terminate an ongoing call session,
  - if it is *not* intended to access the resource representing the call session after its termination, delete the resource **http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}**
  - if it *is* intended to access information about the call session after its termination, use the POST method to submit a termination requestto the resource **http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/terminate**

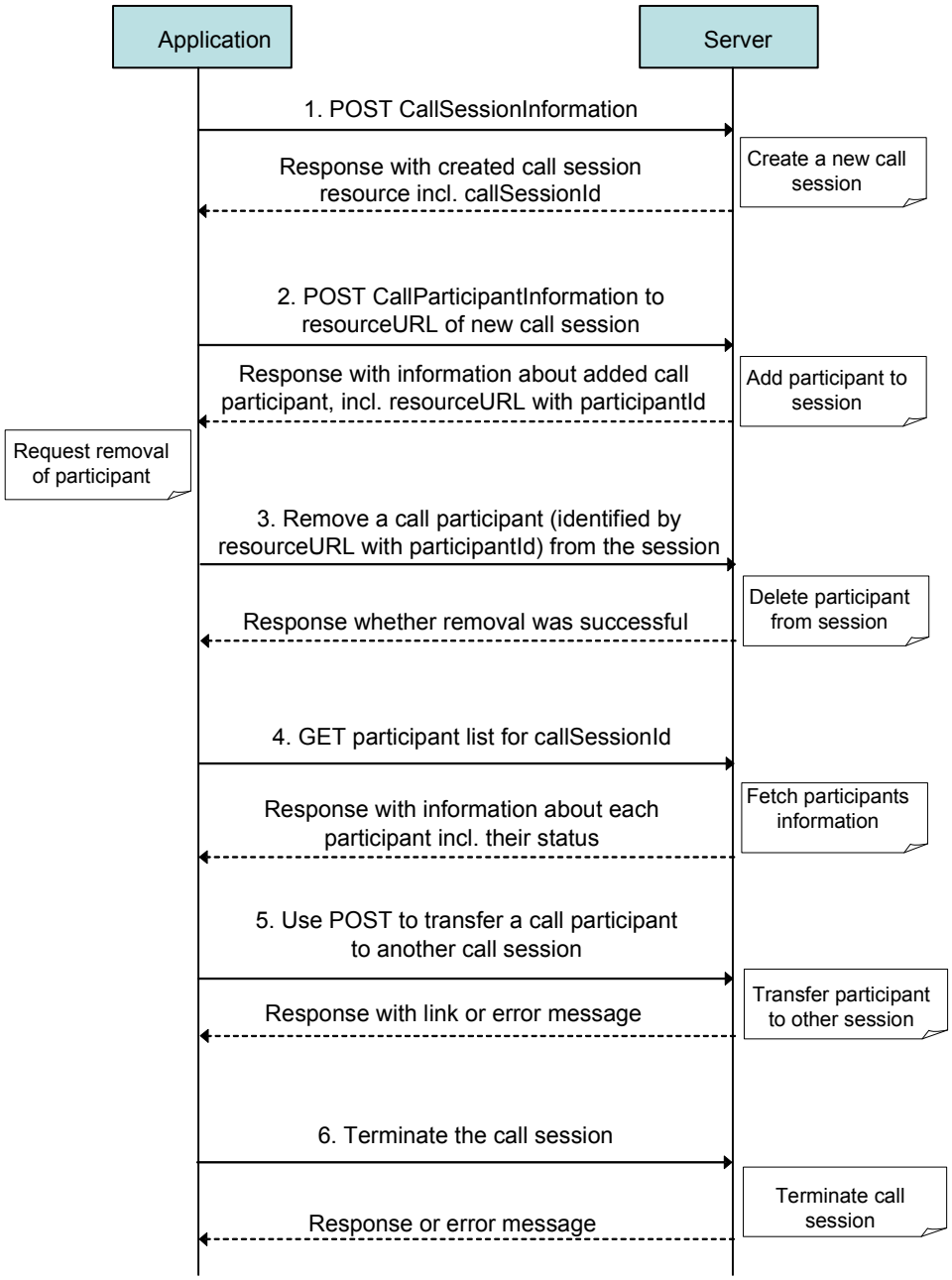

Figure 2 Creating and manipulating a call session

Outline of flow:

1. To create a new call session, the Application uses the POST method to submit a CallSessionInformation structure to the resource containing all call sessions, thereby triggering the creation of a new call session resource, and receives the resulting resourceURL containing the callSessionId.
2. To add more participants to an existing call session, the Application uses the POST method to submit a CallParticipantInformation structure to the resource containing all participants of a session, thereby triggering the addition of a new participant resource, and receives the resulting resourceURL containing the participantId.
3. To remove a participant from an existing call session, the Application can use two different methods:

a. The Application applies the DELETE method to the resource that represents the participant to be removed. This triggers the server to terminate that participant's connection to the call session, and to remove any indication that this participant has been part of the call session.

b. Alternatively, the Application uses the POST method to submit a termination request to the "terminate" child of the resource that represents the participant to be removed. This triggers the server to terminate that participant's connection to the call session, and to update its status and call duration information.

4. To receive the updated list of participants, the Application reads the resource containing all participants of the session.

5. In order to make a call transfer (which effectively is to transfer a participant from an ongoing session to another one), the Application uses the POST method to submit a resourceURL that identifies the target call session to the "transfer" child of the resourceURL which addresses the participant to be transferred within the source call session. The Server sets the status of the call participant in the source session to "CallParticipantTerminated", adds the participant to the destination session, and provides a link to the representation of the call participant in the destination call session.

6. To terminate a call session, the Application can use two different methods:

a. The Application applies the DELETE method to the resourceURL that represents the session. In this case, the application receives a response whether the deletion was successful. Information about a call session that was deleted is no longer available

b. Alternatively, the Application uses the POST method to submit a termination request to the "terminate" child of the resource URL that represents the call session. In this case, the server keeps information about the session for a time interval that is defined by operator policies.

Announcements and Notifications in call sessions:

Note that setting up and maintaining a call session usually involves announcements and status monitoring.

Playing an announcement to new participants and asking them for an interaction improves user experience and prevents connecting fax machines, voice boxes etc. to a call session. Monitoring the status of the call participants is either done by subscribing to notifications about events that change the status, or by polling the resources representing the call session or the call participants.

The ThirdPartyCall API allows subscribing to notifications about the created call session and to request playing default announcements by supplying the according optional parameters in the CallSessionInformation. Alternatively, in accordance with [3GPP 29.199-02], a plain call session can be created by omitting these parameters. In such a case, the Application can use the methods specified in [REST_TS_CallNotif] and [REST_TS_AudioCall] to realize this functionality.

5.4 Resource: All call sessions

The resource used is:

http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions

This resource is used as a container for all call sessions, and to set up a new call session.

5.4.1 Request URI variables

The following request URI variables are common for all HTTP commands:

Name	Description
serverRoot	server base url: hostname+port+base path. Example: http://example.com/exampleAPI
apiVersion	version of the ParlayREST API clients want to use (e.g. 1 for version 1.x)

5.4.2 Response Codes

5.4.2.1 HTTP Response Codes

For HTTP response codes, see [OMA_REST_TS_Common].

5.4.2.2 Exception fault codes

For Policy Exception and Service Exception fault codes applicable to Third Party Call, see [3GPP 29.199-02].

5.4.3 GET

This operation is used for retrieving a list of all call sessions.

5.4.3.1 Example: Retrieving a list of all call sessions (Informative)

5.4.3.1.1 Request

```
GET /exampleAPI/1/thirdpartycall/callSessions HTTP/1.1
Accept: application/xml
Host: example.com:80
```

5.4.3.1.2 Response

```
HTTP/1.1 200 OK
Content-Type: application/xml
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callSessionList xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
  <callSession>
    <participant>
      <participantAddress>tel:+4912345678901</participantAddress>
      <participantName>Max Muster</participantName>
      <participantStatus>CallParticipantConnected</participantStatus>
      <startTime>2010-06-28T17:50:51</startTime>
      <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt001</resourceURL>
    </participant>
    <participant>
      <participantAddress>tel:+4412345678901</participantAddress>
      <participantName>Peter E. Xample</participantName>
      <participantStatus>CallParticipantInitial</participantStatus>
      <startTime>2010-06-28T17:50:51</startTime>
      <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt002</resourceURL>
    </participant>
    <terminated>false</terminated>
    <clientCorrelator>104567</clientCorrelator>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001</resourceURL>
  </callSession>
  <callSession>
    <participant>
      <participantAddress>tel:+1234567890123</participantAddress>
      <participantName>Mary E. Xample</participantName>
      <participantStatus>CallParticipantTerminated</participantStatus>
```

```
      <startTime>2010-06-28T17:50:51</startTime>
      <duration>135</duration>
      <terminationCause>CallParticipantAborted</terminationCause>
      <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt001</resourceURL>
    </participant>
    <participant>
      <participantAddress>tel:+1567890123456</participantAddress>
      <participantName>John E. Xample</participantName>
      <participantStatus>CallParticipantTerminated</participantStatus>
      <startTime>2010-06-28T17:51:51</startTime>
      <duration>134</duration>
      <terminationCause>CallParticipantAborted</terminationCause>
      <clientCorrelator>224567</clientCorrelator>
      <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002</resourceURL>
    </participant>
    <terminated>true</terminated>
    <clientCorrelator>204567</clientCorrelator>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002</resourceURL>
  </callSession>
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions</resourceURL>
</tpc:callSessionList>
```

Note the following: The clientCorrelator element is an optional field intended to be used in conjunction with resource creation by POST. Therefore, the clientCorrelator can be contained in those call participant structures which have been added to an existing session at a later time, but not in those that have been passed as part of the CallSessionInformation structure at the time the session was created.

5.4.4 PUT

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: GET, POST' field in the response as per section 14.7 of [RFC 2616].

5.4.5 POST

This operation is used for creating a new call session.

There SHALL be at least one participant at the time the session is created. The maximum number allowed is defined by operator policies, but SHALL NOT be smaller than 2. The server SHALL NOT create the call session, and SHALL return a policy error POL0240 in case the limit is exceeded.

If the client provides a "callbackReference" element, the server SHALL notify the client using that reference about events occurring in the call.

It is NOT RECOMMENDED to instantiate the "clientCorrelator" sub-element of the "participant" element when creating a call session, because that information is not necessary in this case.

5.4.5.1 Example 1: Creating a "plain" call session, response with copy of created resource (Informative)

This example illustrates the creation of a call session without setting up announcements and subscribing to notifications. These latter items would need to be done using the resources provided in [REST_TS_CallNotif] and [REST_TS_AudioCall]. The response includes *a copy of the created resource*.

5.4.5.1.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions HTTP/1.1
Content-Type: application/xml
Accept: application/xml
Content-Length: nnnn
Host: example.com:80

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callSessionInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
    <participant>
      <participantAddress>tel:+4912345678901</participantAddress>
      <participantName>Max Muster</participantName>
    </participant>
    <participant>
      <participantAddress>tel:+4412345678901</participantAddress>
      <participantName>Peter E. Xample</participantName>
    </participant>
    <clientCorrelator>104567</clientCorrelator>
</tpc:callSessionInformation>
```

5.4.5.1.2 Response

```
HTTP/1.1 201 Created
Content-Type: application/xml
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callSessionInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
  <participant>
    <participantAddress>tel:+4912345678901</participantAddress>
    <participantName>Max Muster</participantName>
    <participantStatus>CallParticipantConnected</participantStatus>
    <startTime>2010-06-28T17:50:51</startTime>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt001</resourceURL>
  </participant>
  <participant>
    <participantAddress>tel:+4412345678901</participantAddress>
    <participantName>Peter E. Xample</participantName>
    <participantStatus>CallParticipantInitial</participantStatus>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt002</resourceURL>
  </participant>
  <terminated>false</terminated>
  <clientCorrelator>104567</clientCorrelator>
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001</resourceURL>
</tpc:callSessionInformation>
```

5.4.5.2 Example 2: Creating a "plain" call session, response with location of created resource (Informative)

This example illustrates the creation of a call session without setting up announcements and subscribing to notifications. These latter items would need to be done using the resources provided in [REST_TS_CallNotif] and [REST_TS_AudioCall]. The response includes *the location of the created resource*.

5.4.5.2.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions HTTP/1.1
Content-Type: application/xml
Accept: application/xml
Content-Length: nnnn
Host: example.com:80

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callSessionInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
    <participant>
      <participantAddress>tel:+4912345678901</participantAddress>
      <participantName>Max Muster</participantName>
    </participant>
    <participant>
      <participantAddress>tel:+4412345678901</participantAddress>
      <participantName>Peter E. Xample</participantName>
    </participant>
    <clientCorrelator>104567</clientCorrelator>
</tpc:callSessionInformation>
```

5.4.5.2.2 Response

```
HTTP/1.1 201 Created
Content-Type: application/xml
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<common:resourceReference xmlns:common="urn:oma:xml:rest:common:1">
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001</resourceURL>
</common:resourceReference>
```

5.4.5.3 Example 3: Creating a call session, setting up announcements and subscribing to notifications (Informative)

This example illustrates the use of the parameters for setting up announcements and subscribing to notifications related to the call session to be created. The response includes a *copy of the created resource*. Note that alternatively, the location of the created resource can be included in the response, by returning a 'resourceReference' root element, as illustrated in section 5.4.5.2.2.

5.4.5.3.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions HTTP/1.1
Content-Type: application/xml
Accept: application/xml
```

```
Content-Length: nnnn
Host: example.com:80

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callSessionInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
    <participant>
      <participantAddress>tel:+4912345678901</participantAddress>
      <participantName>Max Muster</participantName>
    </participant>
    <participant>
      <participantAddress>tel:+4412345678901</participantAddress>
      <participantName>Peter E. Xample</participantName>
    </participant>
    <participantAnnouncement>predefinedAnnouncement1ForParticipant</participantAnnouncement>
    <originatorAnnouncement>predefinedAnnouncement1ForOriginator</originatorAnnouncement>
    <callbackReference>
        <notifyURL>http://application.example.com/notifications/NotificationURL</notifyURL>
    </callbackReference>
    <clientCorrelator>304567</clientCorrelator>
</tpc:callSessionInformation>
```

5.4.5.3.2 Response

```
HTTP/1.1 201 Created
Content-Type: application/xml
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callSessionInformation xmlns:tpc ="urn:oma:xml:rest:thirdpartycall:1">
  <participant>
    <participantAddress>tel:+4912345678901</participantAddress>
    <participantName>Max Muster</participantName>
    <participantStatus>CallParticipantConnected</participantStatus>
    <startTime>2010-06-28T17:50:51</startTime>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003/participants/pt001</resourceURL>
  </participant>
  <participant>
    <participantAddress>tel:+4412345678901</participantAddress>
    <participantName>Peter E. Xample</participantName>
    <participantStatus>CallParticipantInitial</participantStatus>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003/participants/pt002</resourceURL>
  </participant>
  <participantAnnouncement>predefinedAnnouncement1ForParticipant</participantAnnouncement>
  <originatorAnnouncement>predefinedAnnouncement1ForOriginator</originatorAnnouncement>
  <callbackReference>
      <notifyURL>http://application.example.com/notifications/NotificationURL</notifyURL>
  </callbackReference>
  <terminated>false</terminated>
  <clientCorrelator>104567</clientCorrelator>
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003</resourceURL>
</tpc:callSessionInformation>
```

5.4.6 DELETE

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: GET, POST' field in the response as per section 14.7 of [RFC 2616].

5.5 Resource: Individual call session

The resource used is:

http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}

This resource is used to represent a single call session.

5.5.1 Request URI variables

The following request URI variables are common for all HTTP commands:

Name	Description
serverRoot	server base url: hostname+port+base path. Example: http://example.com/exampleAPI
apiVersion	version of the ParlayREST API clients want to use (e.g. 1 for version 1.x)
callSessionId	identifier of the call session

5.5.2 Response Codes

5.5.2.1 HTTP Response Codes

For HTTP response codes, see [OMA_REST_TS_Common].

5.5.2.2 Exception fault codes

For Policy Exception and Service Exception fault codes applicable to Third Party Call, see [3GPP 29.199-02].

5.5.3 GET

This operation is used for retrieving the information about a call session.

5.5.3.1 Example: Retrieving call session information (Informative)

This example shows also an alternative way to indicate desired content type in response from the server, by using URL query parameter "?resFormat" which is described in [OMA_REST_TS_Common].

5.5.3.1.1 Request

```
GET /exampleAPI/1/thirdpartycall/callSessions/cs001?resFormat=XML HTTP/1.1
Host: example.com:80
```

5.5.3.1.2 Response

```
HTTP/1.1 200 OK
Content-Type: application/xml
Content-Length: nnnn
```

```
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callSessionInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
  <participant>
    <participantAddress>tel:+4912345678901</participantAddress>
    <participantName>Max Muster</participantName>
    <participantStatus>CallParticipantConnected</participantStatus>
    <startTime>2010-06-28T17:50:51</startTime>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt001</resourceURL>
  </participant>
  <participant>
    <participantAddress>tel:+4412345678901</participantAddress>
    <participantName>Peter E. Xample</participantName>
    <participantStatus>CallParticipantInitial</participantStatus>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt002</resourceURL>
  </participant>
  <terminated>false</terminated>
  <clientCorrelator>104567</clientCorrelator>
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001</resourceURL>
</tpc:callSessionInformation>
```

5.5.4 PUT

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: GET, DELETE' field in the response as per section 14.7 of [RFC 2616].

5.5.5 POST

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: GET, DELETE' field in the response as per section 14.7 of [RFC 2616].

5.5.6 DELETE

This operation is used for terminating a call session and removing the related information from the server. The server MUST update the status of all participants to reflect the call termination, and MUST return in the response that final status of the resource.

5.5.6.1 Example: Terminating a call session (Informative)

5.5.6.1.1 Request

```
DELETE /exampleAPI/1/thirdpartycall/callSessions/cs002 HTTP/1.1
Accept: application/xml
Host: example.com:80
```

5.5.6.1.2 Response

```
HTTP/1.1 200 OK
Content-Type: application/xml
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT
```

```
<?xml version="1.0" encoding="UTF-8"?>
<tpc:callSessionInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
  <participant>
    <participantAddress>tel:+1234567890123</participantAddress>
    <participantName>Mary E. Xample </participantName>
    <participantStatus>CallParticipantTerminated</participantStatus>
    <startTime>2010-06-28T17:50:51</startTime>
    <duration>135</duration>
    <terminationCause>CallParticipantAborted</terminationCause>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt001</resourceURL>
  </participant>
  <participant>
    <participantAddress>tel:+1567890123456</participantAddress>
    <participantName>John E. Xample</participantName>
    <participantStatus>CallParticipantTerminated</participantStatus>
    <startTime>2010-06-28T17:51:51</startTime>
    <duration>134</duration>
    <terminationCause>CallParticipantAborted</terminationCause>
    <clientCorrelator>224567</clientCorrelator>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002</resourceURL>
  </participant>
  <terminated>true</terminated>
  <clientCorrelator>204567</clientCorrelator>
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002</resourceURL>
</tpc:callSessionInformation>
```

5.6 Resource: Call session termination

The resource used is:

http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/terminate

This resource is used to terminate a call session, keeping the session information on the server. The server deletes the information about terminated call sessions after a certain time interval, as defined by service provider policies.

5.6.1 Request URI variables

The following request URI variables are common for all HTTP commands:

Name	Description
serverRoot	server base url: hostname+port+base path. Example: http://example.com/exampleAPI
apiVersion	version of the ParlayREST API clients want to use (e.g. 1 for version 1.x)
callSessionId	identifier of the call session

5.6.2 Response Codes

5.6.2.1 HTTP Response Codes

For HTTP response codes, see [OMA_REST_TS_Common].

5.6.2.2 Exception fault codes

For Policy Exception and Service Exception fault codes applicable to Third Party Call, see [3GPP 29.199-02].

5.6.3 GET

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: POST' field in the response as per section 14.7 of [RFC 2616].

5.6.4 PUT

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: POST' field in the response as per section 14.7 of [RFC 2616].

5.6.5 POST

This operation is used to terminate a call session, keeping the session information on the server.

5.6.5.1 Example: Terminating a call session without removing the status information (Informative)

5.6.5.1.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs001/terminate HTTP/1.1
Content-Type: application/xml
Content-Length: nnnnAccept: application/xml
Host: example.com:80

<?xml version="1.0" encoding="UTF-8"?>
<tpc:terminationParameters xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1"/>
```

5.6.5.1.2 Response

```
HTTP/1.1 204 No Content
Date: Mon, 28 Jun 2010 17:51:59 GMT
```

5.6.6 DELETE

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: POST' field in the response as per section 14.7 of [RFC 2616].

5.7 Resource: All participants of a call session

The resource used is:

http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/participants

This resource is used to store information related to the participants in a call session and to add a participant to an ongoing call session.

5.7.1 Request URI variables

The following request URI variables are common for all HTTP commands:

Name	Description
serverRoot	server base url: hostname+port+base path. Example: http://example.com/exampleAPI
apiVersion	version of the ParlayREST API clients want to use (e.g. 1 for version 1.x)
callSessionId	identifier of the call session

5.7.2 Response Codes

5.7.2.1 HTTP Response Codes

For HTTP response codes, see [OMA_REST_TS_Common].

5.7.2.2 Exception fault codes

For Policy Exception and Service Exception fault codes applicable to Third Party Call, see [3GPP 29.199-02].

5.7.3 GET

This operation is used to read the information about all participants in a call session.

5.7.3.1 Example: Retrieving information about all call participants (Informative)

5.7.3.1.1 Request

```
GET /exampleAPI/1/thirdpartycall/callSessions/cs002/participants HTTP/1.1
Accept: application/xml
Host: example.com:80
```

5.7.3.1.2 Response

```
HTTP/1.1 200 OK
Content-Type: application/xml
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callParticipantList xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
    <participant>
      <participantAddress>tel:+1234567890123</participantAddress>
      <participantName>Mary E. Xample </participantName>
      <participantStatus>CallParticipantTerminated</participantStatus>
      <startTime>2010-06-28T17:50:51</startTime>
      <duration>135</duration>
      <terminationCause>CallParticipantAborted</terminationCause>
      <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt001</resourceURL>
    </participant>
    <participant>
      <participantAddress>tel:+1567890123456</participantAddress>
```

```
      <participantName>John E. Xample</participantName>
      <participantStatus>CallParticipantTerminated</participantStatus>
      <startTime>2010-06-28T17:51:51</startTime>
      <duration>134</duration>
      <terminationCause>CallParticipantAborted</terminationCause>
      <clientCorrelator>224567</clientCorrelator>
      <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002</resourceURL>
    </participant>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants</resourceURL>
</tpc:callParticipantList>
```

5.7.4 PUT

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: GET, POST' field in the response as per section 14.7 of [RFC 2616].

5.7.5 POST

This operation is used to add a participant to the call session.

The maximum number of active participants allowed in a call session is defined by operator policies, but SHALL NOT be smaller than 2. The server SHALL NOT add the participant, and SHALL return a policy error POL0240 "Too many participants" in case the limit is exceeded.

5.7.5.1 Example 1: Adding a participant to a call session, response with copy of created resource (Informative)

5.7.5.1.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs002/participants HTTP/1.1
Content-Type: application/xml
Accept: application/xml
Content-Length: nnnn
Host: example.com:80

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callParticipantInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
  <participantAddress>tel:+1567890123456</participantAddress>
  <participantName>John E. Xample</participantName>
  <clientCorrelator>224567</clientCorrelator>
</tpc:callParticipantInformation>
```

5.7.5.1.2 Response

```
HTTP/1.1 201 Created
Content-Type: application/xml
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callParticipantInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
```

```
    <participantAddress>tel:+1567890123456</participantAddress>
    <participantName>John E. Xample</participantName>
    <participantStatus>CallParticipantInitial</participantStatus>
    <clientCorrelator>224567</clientCorrelator>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002</resourceURL>
</tpc:callParticipantInformation>
```

5.7.5.2 Example 2: Adding a participant to a call session, response with location of created resource (Informative)

5.7.5.2.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs002/participants HTTP/1.1
Content-Type: application/xml
Accept: application/xml
Content-Length: nnnn
Host: example.com:80

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callParticipantInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
  <participantAddress>tel:+1567890123456</participantAddress>
  <participantName>John E. Xample</participantName>
  <clientCorrelator>224567</clientCorrelator>
</tpc:callParticipantInformation>
```

5.7.5.2.2 Response

```
HTTP/1.1 201 Created
Content-Type: application/xml
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<common:resourceReference xmlns:common="urn:oma:xml:rest:common:1">
  <resourceURL> http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002</resourceURL>
</common:resourceReference>
```

5.7.6 DELETE

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: GET, POST' field in the response as per section 14.7 of [RFC 2616].

5.8 Resource: Individual call session participant

The resource used is:

http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/participants/{participantId}

This resource is used to manage information regarding a call participant in a call session.

5.8.1 Request URI variables

The following request URI variables are common for all HTTP commands:

Name	Description
serverRoot	server base url: hostname+port+base path. Example: http://example.com/exampleAPI
apiVersion	version of the ParlayREST API clients want to use (e.g. 1 for version 1.x)
callSessionId	identifier of the call session
participantId	identifier of the call participant

5.8.2 Response Codes

5.8.2.1 HTTP Response Codes

For HTTP response codes, see [OMA_REST_TS_Common].

5.8.2.2 Exception fault codes

For Policy Exception and Service Exception fault codes applicable to Third Party Call, see [3GPP 29.199-02].

5.8.3 GET

This operation is used to read information about a call participant.

5.8.3.1 Example: Retrieving information about a call participant (Informative)

5.8.3.1.1 Request

```
GET /exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002 HTTP/1.1
Accept: application/xml
Host: example.com:80
```

5.8.3.1.2 Response

```
HTTP/1.1 200 OK
Content-Type: application/xml
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callParticipantInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
    <participantAddress>tel:+1567890123456</participantAddress>
    <participantName>John E. Xample</participantName>
    <participantStatus>CallParticipantConnected</participantStatus>
    <startTime>2010-06-28T17:51:51</startTime>
    <clientCorrelator>224567</clientCorrelator>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002</resourceURL>
</tpc:callParticipantInformation>
```

5.8.4 PUT

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: GET, DELETE' field in the response as per section 14.7 of [RFC 2616].

5.8.5 POST

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: GET, DELETE' field in the response as per section 14.7 of [RFC 2616].

5.8.6 DELETE

This operation is used to remove a participant from a call session, and to delete the information regarding this call participant from the server. The server MUST update the status of the participant to reflect the call termination, and MUST return in the response that final status of the resource.

The Server SHALL remove the call participant resource upon successful execution of the request. Further, the Server SHOULD keep the information about the call participant (with the status accordingly set to CallParticipantTerminated) in the ancestor resource representing the call session, but is expected to remove the resourceURL field from the data structure representing a removed participant.

5.8.6.1 Example: Deleting a participant from a call session (Informative)

5.8.6.1.1 Request

```
DELETE /exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002 HTTP/1.1
Accept: application/xml
Host: example.com:80
```

5.8.6.1.2 Response

```
HTTP/1.1 200 OK
Content-Type: application/xml
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callParticipantInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
  <participantAddress>tel:+1567890123456</participantAddress>
  <participantName>John E. Xample</participantName>
  <participantStatus>CallParticipantTerminated</participantStatus>
  <startTime>2010-06-28T17:51:51</startTime>
  <duration>134</duration>
  <terminationCause>CallParticipantAborted</terminationCause>
  <clientCorrelator>224567</clientCorrelator>
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002</resourceURL>
</tpc:callParticipantInformation>
```

5.9 Resource: Call session participant transfer

The resource used is:

http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/participants/{participantId}/transfer

This resource is used to transfer a participant from one call session to another.

5.9.1 Request URI variables

The following request URI variables are common for all HTTP commands:

Name	Description
serverRoot	server base url: hostname+port+base path. Example: http://example.com/exampleAPI
apiVersion	version of the ParlayREST API clients want to use (e.g. 1 for version 1.x)
callSessionId	identifier of the call session
participantId	identifier of the call participant

5.9.2 Response Codes

5.9.2.1 HTTP Response Codes

For HTTP response codes, see [OMA_REST_TS_Common].

5.9.2.2 Exception fault codes

For Policy Exception and Service Exception fault codes applicable to Third Party Call, see [3GPP 29.199-02].

5.9.3 GET

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: POST' field in the response as per section 14.7 of [RFC 2616].

5.9.4 PUT

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: POST' field in the response as per section 14.7 of [RFC 2616].

5.9.5 POST

This operation is used to transfer a participant from one call session to another. In case of successful transfer, "303 See Other" SHALL be returned, providing a Location header and a resourceReference root element with the location representing the call participant in the destination call session.

The maximum number of active participants allowed in a call session is defined by operator policies, but SHALL NOT be smaller than 2. The server SHALL NOT add the participant, and SHALL return a policy error POL0240 "Too many participants" in case the limit is exceeded.

5.9.5.1 Example: Transferring a participant from one call session to another (Informative)

5.9.5.1.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt002/transfer HTTP/1.1
Content-Type: application/xml
Accept: application/xml
Content-Length: nnnn
Host: example.com:80
```

```
<?xml version="1.0" encoding="UTF-8"?>
<tpc:transferParameters xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
  <destinationCallSession>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002</destinationCallSession>
</tpc:transferParameters>
```

5.9.5.1.2 Response

```
HTTP/1.1 303 See Other
Content-Type: application/xml
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt003
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<common:resourceReference xmlns:common="urn:oma:xml:rest:common:1">
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt003</resourceURL>
</common:resourceReference>
```

5.9.6 DELETE

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: POST' field in the response as per section 14.7 of [RFC 2616].

5.10 Resource: Call session participant termination

The resource used is:

http://{serverRoot}/{apiVersion}/thirdpartycall/callSessions/{callSessionId}/participants/{participantId}

terminate

This resource is used to remove a participant from a call session, keeping the participant information on the server. The server deletes the information about terminated call sessions after a certain time interval, as defined by service provider policies.

5.10.1 Request URI variables

The following request URI variables are common for all HTTP commands:

Name	Description
serverRoot	server base url: hostname+port+base path. Example: http://example.com/exampleAPI
apiVersion	version of the ParlayREST API clients want to use (e.g. 1 for version 1.x)
callSessionId	identifier of the call session
participantId	identifier of the call participant

5.10.2 Response Codes

5.10.2.1 HTTP Response Codes

For HTTP response codes, see [OMA_REST_TS_Common].

5.10.2.2 Exception fault codes

For Policy Exception and Service Exception fault codes applicable to Third Party Call, see [3GPP 29.199-02].

5.10.3 GET

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: POST' field in the response as per section 14.7 of [RFC 2616].

5.10.4 PUT

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: POST' field in the response as per section 14.7 of [RFC 2616].

5.10.5 POST

This operation is used to delete a participant from a call session, keeping the participant information on the server..

5.10.5.1 Example: Deleting a participant from a call session without removing the status information (Informative)

5.10.5.1.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt001/terminate HTTP/1.1
Content-Type: application/xml
Content-Length: nnnn
Accept: application/xml
Host: example.com:80

<?xml version="1.0" encoding="UTF-8"?>
<tpc:terminationParameters xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1"/>
```

5.10.5.1.2 Response

```
HTTP/1.1 204 No Content
Date: Mon, 28 Jun 2010 17:51:59 GMT
```

5.10.6 DELETE

Method not allowed by the resource. The returned HTTP error status is 405. The server SHOULD also include the 'Allow: POST' field in the response as per section 14.7 of [RFC 2616].

Appendix A. Change History (Informative)

A.1 Approved Version History

Reference	Date	Description
n/a	n/a	No prior version –or- No previous version within OMA

A.2 Draft/Candidate Version 1.0 History

Document Identifier	Date	Sections	Description
Draft Versions: OMA-TS-ParlayREST_ThirdPartyCall-V1_0	15 Apr 2010	Many	Skeleton document
	03 May 2010	Many	Implemented OMA-ARC-REST-2010-0175R03
	05 May 2010	5.2.1	Implemented OMA-ARC-REST-2010-0208-CR_ThirdPartyCall_small_fixes
	26 May 2010	5.1	Editorial fix to fig 1.
	02 Jul 2010	Many	Implemented CR OMA-ARC-REST-2010-0276R02-CR_ThirdPartyCall_examples
	07 Jul 2010	Many	Editorial: replaced phone numbers and names in examples by fictitious ones
	08 Sep 2010	Many	CRs incorporated - OMA-ARC-REST-2010-0347R02-CR_JSON_for_ThirdPartyCall - OMA-ARC-REST-2010-0348R01-CR_FormUrlEncoded_for_ThirdPartyCall - OMA-ARC-REST-2010-0353R01-CR_Empty_Post_for_Termination_3PC - OMA-ARC-REST-2010-0349R01-CR_SCRs_for_ThirdPartyCall - OMA-ARC-REST-2010-0480-CR_ThirdPartyCall_optional_resourceReference_in_resource_table_resolution_A063 Action Items implemented - REST-2010-A085: To implement OMA-ARC-REST-2010-0445-CR_DevCap_add_to_resourceURL_description in the next baseline. No CRs required. → closed with no change, as resourceURL is mandatory in all data structuresin this TS - REST-2010-A077: To fix this as a clerical. Ref OMA-ARC-REST-2010-0394-INP_Fixing_JSON_references. Editing instructions removed
	15 Sep 2010	Many	CRs incorporated - OMA-ARC-REST-2010-0511R01-CR_Update_ThirdPartyCall_catering_for_OneAPI_Call_Control_profile - OMA-ARC-REST-2010-0505R01-CR_Fixing_Modularization_Confusion_TS_3PC
	24 Sep 2010	Many	CRs incorporated - OMA-ARC-REST-2010-0531-CR_3PC_Editors_Notes - OMA-ARC-REST-2010-0529-CR_More_than_2_participants_in_call_session_3PC Implemented change proposed by CR OMA-ARC-REST-2010-0516R01 analogously to this TS as an editorial, closing action REST-2010-A102.
	25 Sep 2010	2.2	Editorial fixes in informative references
	30 Sep 2010	5.7.5.2.2	Fixed mistake in implementation of CR 505R01
	07 Oct 2010	All	Editorial fixes: Styles and formatting History table
	29 Oct 2010	Many	- Implemented CR OMA-ARC-REST-2010-0591R01-CR_CONRR_editorials_ThirdPartyCall - Editorial: Replaced “Enabler” by “API” where appropriate

Document Identifier	Date	Sections	Description
	05 Nov 2010	5	Editorial: fixed one reference
	06 Nov 2010	Some	Fixed more editorials, closing the following action items assigned during CONRR: REST-2010-A136, REST-2010-A140, REST-2010-A172, REST-2010-0145
	19 Nov 2010	Some	Implemented CRs: • OMA-ARC-REST-2010-0604-CR_CONRR_CallSessionInformation_CallParticipantInformation • OMA-ARC-REST-2010-0618R01-CR_Term_Enabler_3PC • OMA-ARC-REST-2010-0621R02-CR_resFormat_3PC • OMA-ARC-REST-2010-0626-CR_closing_E0013_E0014_3PC • OMA-ARC-REST-2010-0644-CR_CONRR_resolutions_3PCall
	06 Dec 2010	4.1, 5.1	Implemented CR OMA-ARC-REST-2010-0713-CR_fix_introduction_of_ThirdPartyCall
	10 Dec 2010	All	TS prepared for Candidate after CONRR. Editorial changes performed to close action items: REST-2010-A281, REST-2010-A296, REST-2010-A310.
	15 Dec 2010	Many	Editorial: In some places, {serverRoot } contained the API version, i.e. http://example.com/exampleAPI/1. This has been removed.
Candidate Version: OMA-TS-ParlayREST_ThirdPartyCall-V1_0	11 Jan 2011	All	Status changed to Candidate by TP: OMA-TP-2010-0531R01-INP_ParlayREST_2_0_for_Candidate_approval

Appendix B. Static Conformance Requirements (Normative)

The notation used in this appendix is specified in [SCRRULES].

B.1 SCR for ParlayREST.3PC Server

Item	Function	Reference	Requirement
PARLAYREST-3PC-SUPPORT-S-001-M	Support for the Third Party Call REST API	5	
PARLAYREST-3PC-SUPPORT-S-002-M	Support for the XML request & response format	5	
PARLAYREST-3PC-SUPPORT-S-003-M	Support for the JSON request & response format	5	
PARLAYREST- 3PC-SUPPORT-S-004-O	Support for the application/form-urlencoded format	Appendix C	

B.1.1 SCR for ParlayREST.3PC.Sessions Server

Item	Function	Reference	Requirement
PARLAYREST-3PC-SESS-S-001-M	Support for call sessions	5.4	
PARLAYREST-3PC-SESS-S-002-O	Retrieving a list of all call sessions – GET	5.4.3	
PARLAYREST-3PC-SESS-S-003-M	Creating a call session – POST (XML or JSON)	5.4.5	
PARLAYREST-3PC-SESS-S-004-O	Creating a call session – POST (www-form-urlencoded)	C.1	
PARLAYREST-3PC-SESS-S-005-M	Support for setting up announcements and subscribing to notifications upon call session creation	5.4.5	

B.1.2 SCR for ParlayREST.3PC.IndividualSession Server

Item	Function	Reference	Requirement
PARLAYREST-3PC-INDSESS-S-001-M	Support for access to individual call sessions	5.5	
PARLAYREST-3PC-INDSESS-S-002-M	Retrieving call session information – GET	5.5.3	
PARLAYREST-3PC-INDSESS-S-003-M	Terminating a call session and removing status information – DELETE	5.5.6	

B.1.3 SCR for ParlayREST.3PC.IndividualSession.Terminate Server

Item	Function	Reference	Requirement
PARLAYREST-3PC-INDSESS-TERM-S-001-O	Support for terminating a call session without removing the status information	5.6	PARLAYREST-3PC-INDSESS-TERM-S-002-O
PARLAYREST-3PC-	Terminating a call session without	5.6.5	

Item	Function	Reference	Requirement
INDSESS-TERM-S-002-O	removing the status information – POST (XML or JSON)		
PARLAYREST-3PC-INDSESS-TERM-S-003-O	Terminating a call session without removing the status information – POST (www-form-urlencoded)	C.2	

B.1.4 SCR for ParlayREST.3PC.IndividualSession.Participants Server

Item	Function	Reference	Requirement
PARLAYREST-3PC-INDSESS-PART-S-001-M	Support for access to a list of call session participants	5.7	
PARLAYREST-3PC-INDSESS-PART-S-002-M	Retrieving information about all call participants – GET	5.7.3	
PARLAYREST-3PC-INDSESS-PART-S-003-M	Adding a participant to a call session – POST (XML or JSON)	5.7.5	
PARLAYREST-3PC-INDSESS-PART-S-004-O	Adding a participant to a call session – POST (www-form-urlencoded)	C.3	

B.1.5 SCR for ParlayREST.3PC.IndividualSession.IndividualParticipant Server

Item	Function	Reference	Requirement
PARLAYREST-3PC-INDSESS-INDPART-S-001-M	Support for access to information about a call participant	5.8	
PARLAYREST-3PC-INDSESS-INDPART-S-002-M	Retrieving information about a call participant – GET	5.8.3	
PARLAYREST-3PC-INDSESS-INDPART-S-003-M	Deleting a participant and the related status information from a call session – DELETE	5.8.6	

B.1.6 SCR for ParlayREST.3PC.IndividualSession.IndividualParticipant.Transfer Server

Item	Function	Reference	Requirement
PARLAYREST-3PC-INDSESS-INDPART-TRANS-S-001-O	Support for transferring a call participant to another call session	5.9	PARLAYREST-3PC-INDSESS-INDPART-TRANS-S-002-O
PARLAYREST-3PC-INDSESS-INDPART-TRANS-S-002-O	Transferring a call participant to another call session – POST (XML or JSON)	5.9.5	
PARLAYREST-3PC-INDSESS-INDPART-TRANS-S-003-O	Transferring a call participant to another call session – POST (www-form-urlencoded)	C.4	

B.1.7 SCR for ParlayREST.3PC.IndividualSession.IndividualParticipant.Terminate Server

Item	Function	Reference	Requirement
PARLAYREST-3PC-INDSESS-INDPART-TERM-S-001-O	Support for deleting a participant from a call session, keeping the related status information	5.10	PARLAYREST-3PC-INDSESS-INDPART-TERM-S-002-O
PARLAYREST-3PC-INDSESS-INDPART-TERM-S-002-O	Deleting a call participant from a call session, keeping the related status information – POST (XML or JSON)	5.10.5	
PARLAYREST-3PC-INDSESS-INDPART-TERM-S-003-O	Deleting a call participant from a call session, keeping the related status information – POST (www-form-urlencoded)	C.5	

Appendix C. Application/x-www-form-urlencoded Request Format for POST Operations (Normative)

This section defines a format for the Third Party Call REST API requests where the body of the request is encoded using the application/x-www-form-urlencoded MIME type.

Note: only the request body is encoded as application/x-www-form-urlencoded, the response is still encoded as XML or JSON depending on the preference of the client and the capabilities of the server.

The encoding is defined below for all Third Party Call REST operations which are based on POST requests.

C.1 Creating a call session

This operation is used to create a call session, see section 5.4.5.

The request parameters are as follows:

Name	Type/Values	Optional	Description
participantAddress	xsd:anyURI [1..unbounded]	No	Address of the user. The first element in this list is considered to denote the “A-Party” (i.e. originator) of the call session.
participantName	xsd:string [0..unbounded]	Yes	The name of the participant.
participantAnnouncement	xsd:string	Yes	A reference to an announcement to be played to the participants listed in the “participant” element upon joining the call. If the “originatorAnnouncement” element is set in addition, that announcement SHALL be played to the first participant instead of this announcement. If this element is not set by the client, no announcement SHALL be played. The server SHALL understand the value “default” and play a default announcement if this value is provided as the content of this element. Further values are allowed as long as they are meaningful to the server, but these values are out of scope of this specification.
originatorAnnouncement	xsd:string	Yes	A reference to an announcement that is played to the first participant listed in the “participant” element. The first participant is viewed as the originator. This element SHALL NOT be provided

			if the element "participantAnnouncement" The content of the field is out of scope for this specification but is assumed to a value that is meaningful to the server.
notifyURL	xsd:anyURI	Yes	URL on which to notify the client of events related to this call session, e.g. participant joining call.
callbackData	xsd:string	Yes	Data the application can register with the server when subscribing to notifications, and that are passed back unchanged in each of the related notifications. This parameter SHALL NOT be present if "notifyURL" is not present.
notificationFormat	common:NotificationFormat	Yes	Default: XML Application can specify the format of the resource representation in notifications that are related to this subscription. The choice is between {XML, JSON} This parameter SHALL NOT be present if "notifyURL" is not present.
chargingDescription	xsd:string [0..unbounded]	Yes	Description of charge to apply to this message. In case charging is required, this parameter MUST be present.
chargingCurrency	xsd:string	Yes	Currency of charge to apply to this message. In case chargingDescription is not present, this parameter MUST NOT be present.
chargingAmount	xsd:decimal	Yes	Charging amount to apply to this message. In case chargingDescription is not present, this parameter MUST NOT be present.
chargingCode	xsd:string	Yes	Charging code to apply to this message. In case chargingDescription is not present, this parameter MUST NOT be present.
media	common:Media [0..unbounded]	Yes	It identifies one or more media type(s) for the call, to be applied to the participants in the call session. If the parameter is omitted, the media type(s) are negotiated by the underlying network. Cardinality SHALL be the same as for

			mediaDirection.
mediaDirection	common:MediaDirection [0..unbounded]	Yes	It identifies one or more direction(s) of media for the call, to be applied to the participants in the call session. If the parameter is omitted, the media type(s) are negotiated by the underlying network. Cardinality SHALL be the same as for media.
changeMediaNotAllowed	xsd:boolean	Yes	If true, no call participant (user) in the call will be permitted to change media type during the call. If false the end user may change media type after the call is established as no network protection mechanism is set up to prevent participant (end user) initiated change of media type. Default: true

If the operation was successful, it returns an HTTP Status of "201 Created".

C.1.1 Example 1: Creating a "plain" call session (Informative)

C.1.1.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions HTTP/1.1
Content-Type: application/x-www-form-urlencoded
Content-Length: nnnn
Accept: application/xml
Host: example.com:80

participantAddress=tel%3A%2B49123456789O1&
participantAddress=tel%3A%2B44123456789O1&
participantName=Max%20Muster&
participantName=Peter%20E.%20Xample&
clientCorrelator=104567
```

C.1.1.2 Response

```
HTTP/1.1 201 Created
Content-Type: application/xml
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callSessionInformation xmlns:tpc ="urn:oma:xml:rest:thirdpartycall:1">
  <participant>
    <participantAddress>tel:+4912345678901</participantAddress>
```

```
    <participantName>Max Muster</participantName>
    <participantStatus>CallParticipantConnected</participantStatus>
    <startTime>2010-06-28T17:50:51</startTime>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt001</resourceURL>
  </participant>
  <participant>
    <participantAddress>tel:+4412345678901</participantAddress>
    <participantName>Peter E. Xample</participantName>
    <participantStatus>CallParticipantInitial</participantStatus>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt002</resourceURL>
  </participant>
  <terminated>false</terminated>
  <clientCorrelator>104567</clientCorrelator>
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001</resourceURL>
</tpc:callSessionInformation>
```

C.1.2 Example 2: Creating a call session, setting up announcements and subscribing to notifications (Informative)

C.1.2.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions HTTP/1.1
Content-Type: application/x-www-form-urlencoded
Content-Length: nnnn
Accept: application/xml
Host: example.com:80

participantAddress=tel%3A%2B49123456789O1&
participantAddress=tel%3A%2B44123456789O1&
participantName=Max%20Muster&
participantName=Peter%20E.%20Xample&
participantAnnouncement=predefinedAnnouncement1ForParticipant&
originatorAnnouncement=predefinedAnnouncement1ForOriginator&
notifyURL=http%3A%2F%2Fapplication.example.com%2Fnotifications%2FNotificationURL
clientCorrelator=104567
```

C.1.2.2 Response

```
HTTP/1.1 201 Created
Content-Type: application/xml
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callSessionInformation xmlns:tpc ="urn:oma:xml:rest:thirdpartycall:1">
  <participant>
    <participantAddress>tel:+4912345678901</participantAddress>
    <participantName>Max Muster</participantName>
    <participantStatus>CallParticipantConnected</participantStatus>
    <startTime>2010-06-28T17:50:51</startTime>
```

```
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003/participants/pt001</resourceURL>
  </participant>
  <participant>
    <participantAddress>tel:+4412345678901</participantAddress>
    <participantName>Peter E. Xample</participantName>
    <participantStatus>CallParticipantInitial</participantStatus>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003/participants/pt002</resourceURL>
  </participant>
  <participantAnnouncement>predefinedAnnouncement1ForParticipant</participantAnnouncement>
  <originatorAnnouncement>predefinedAnnouncement1ForOriginator</originatorAnnouncement>
  <callbackReference>
     <notifyURL>http://application.example.com/notifications/NotificationURL</notifyURL>
  </callbackReference>
  <terminated>false</terminated>
  <clientCorrelator>104567</clientCorrelator>
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003</resourceURL>
</tpc:callSessionInformation>
```

C.2 Terminating a call session without removing the status information

This operation is used to add a participant to a call session, see section 5.6.5.

The request parameters are as follows:

Name	Type/Values	Optional	Description
terminationParameters	(empty)	No	Provides the body of the request, which is an empty string in this version of the specification.

If the operation was successful, it returns an HTTP Status of "204 No Content".

C.2.1 Example (Informative)

C.2.1.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs001/terminate HTTP/1.1
Content-Type: application/x-www-form-urlencoded
Content-Length: nnnn
Accept: application/xml
Host: example.com:80

terminationParameters=
```

C.2.1.2 Response

```
HTTP/1.1 204 No Content
Date: Mon, 28 Jun 2010 17:51:59 GMT
```

C.3 Adding a participant to a call session

This operation is used to add a participant to a call session, see section .

The request parameters are as follows:

Name	Type/Values	Optional	Description
participantAddress	xsd:anyURI	No	Address of the user.
participantName	xsd:string	Yes	The name of the participant.
media	common:Media [0..unbounded]	Yes	When applicable, it indicates the type of media currently used in the call for the identified participant. Cardinality SHALL be the same as for mediaDirection.
mediaDirection	common:MediaDirection [0..unbounded]	Yes	When applicable, it indicates the direction of media currently used in the call for the identified participant. Cardinality SHALL be the same as for media.

If the operation was successful, it returns an HTTP Status of "201 Created".

C.3.1 Example (Informative)

C.3.1.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs002/participants HTTP/1.1
Content-Type: application/x-www-form-urlencoded
Content-Length: nnnn
Accept: application/xml
Host: example.com:80

participantAddress=tel%3A%2B1567890123456&
participantName=John%20E.%20Xample&
clientCorrelator=224567
```

C.3.1.2 Response

```
HTTP/1.1 201 Created
Content-Type: application/xml
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<tpc:callParticipantInformation xmlns:tpc="urn:oma:xml:rest:thirdpartycall:1">
    <participantAddress>tel:+1567890123456</participantAddress>
    <participantName>John E. Xample</participantName>
    <participantStatus>CallParticipantInitial</participantStatus>
```

```
    <clientCorrelator>224567</clientCorrelator>
    <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002</resourceURL>
</tpc:callParticipantInformation>
```

C.4 Transferring a participant from one call session to another

This operation is used to transfer a participant from one call session to another, see section 5.9.5.

The request parameters are as follows:

Name	Type/Values	Optional	Description
destinationCallSession	xsd:anyURI	No	The URI of the call session to which the participant is to be transferred.

If the operation was successful, it returns an HTTP Status of "303 See Other".

C.4.1 Example (Informative)

C.4.1.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt002/transfer HTTP/1.1
Content-Type: application/x-www-form-urlencoded
Content-Length: nnnn
Accept: application/xml
Host: example.com:80

destinationCallSession=http%3A%2F%2Fexample.com%2F1%2Fthirdpartycall%2FcallSessions%2Fcs002
```

C.4.1.2 Response

```
HTTP/1.1 303 See Other
Content-Type: application/xml
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt003
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

<?xml version="1.0" encoding="UTF-8"?>
<common:resourceReference xmlns:common="urn:oma:xml:rest:common:1">
  <resourceURL>http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt003</resourceURL>
</common:resourceReference>
```

C.5 Deleting a participant from a call session without removing the status information

This operation is used to add a participant to a call session, see section 5.10.5.

The request parameters are as follows:

Name	Type/Values	Optional	Description
terminationParameters	(empty)	No	Provides the body of the request, which is an empty string in this version of the specification.

If the operation was successful, it returns an HTTP Status of “204 No Content”.

C.5.1 Example (Informative)

C.5.1.1 Request

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt001/terminate HTTP/1.1
Content-Type: application/x-www-form-urlencoded
Content-Length: nnnn
Accept: application/xml
Host: example.com:80

terminationParameters=
```

C.5.1.2 Response

```
HTTP/1.1 204 No Content
Date: Mon, 28 Jun 2010 17:51:59 GMT
```

Appendix D. JSON examples (Informative)

JSON (JavaScript Object Notation) is a lightweight, text-based, language-independent data interchange format. It provides a simple means to represent basic name-value pairs, arrays and objects. JSON is relatively trivial to parse and evaluate using standard JavaScript libraries, and hence is suited for Parlay REST invocations from browsers or other processors with JavaScript engines. Further information on JSON can be found at [RFC 4627].

The following examples show the request and response for various operations using a JSON binding. The examples follow the XML to JSON serialization rules in [OMA_REST_TS_Common]. A JSON response can be obtained by using the content type negotiation mechanism specified in [OMA_REST_TS_Common].

For full details on the operations themselves please refer to the section number indicated.

D.1 Retrieving a list of all call sessions (section 5.4.3.1)

Request:

```
GET /exampleAPI/1/thirdpartycall/callSessions HTTP/1.1
Accept: application/json
Host: example.com:80
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"callSessionList": {
   "callSession": [
      {
         "clientCorrelator": "104567",
         "participant": [
            {
               "participantAddress": "tel:+4912345678901",
               "participantName": "Max Muster",
               "participantStatus": "CallParticipantConnected",
               "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt001",
               "startTime": "2010-06-28T17:50:51"
            },
            {
               "participantAddress": "tel:+4412345678901",
               "participantName": "Peter E. Xample",
               "participantStatus": "CallParticipantInitial",
               "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt002",
               "startTime": "2010-06-28T17:50:51"
            }
         ],
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001",
         "terminated": "false"
      },
      {
```

```
        "clientCorrelator": "204567",
        "participant": [
          {
            "duration": "135",
            "participantAddress": "tel:+1234567890123",
            "participantName": "Mary E. Xample",
            "participantStatus": "CallParticipantTerminated",
            "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt001 ",
            "startTime": "2010-06-28T17:50:51",
            "terminationCause": "CallParticipantAborted"
          },
          {
            "clientCorrelator": "224567",
            "duration": "134",
            "participantAddress": "tel:+1567890123456",
            "participantName": "John E. Xample",
            "participantStatus": "CallParticipantTerminated",
            "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002",
            "startTime": "2010-06-28T17:51:51",
            "terminationCause": "CallParticipantAborted"
          }
        ],
        "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002",
        "terminated": "true"
      }
    ],
    "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions"
}}
```


D.2 Creating a “plain” call session, response with copy of created resource (section 5.4.5.1)

Request:


```
POST /exampleAPI/1/thirdpartycall/callSessions HTTP/1.1
Content-Type: application/json
Accept: application/json
Content-Length: nnnn
Host: example.com:80

{"callSessionInformation": {
    "clientCorrelator": "104567",
    "participant": [
      {
        "participantAddress": "tel:+4912345678901",
        "participantName": "Max Muster"
      },
      {
        "participantAddress": "tel:+4412345678901",
        "participantName": "Peter E. Xample"
      }
    ]
}}
```

Response:

```
HTTP/1.1 201 Created
Content-Type: application/json
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"callSessionInformation": {
   "clientCorrelator": "104567",
   "participant": [
      {
         "participantAddress": "tel:+4912345678901",
         "participantName": "Max Muster",
         "participantStatus": "CallParticipantConnected",
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt001",
         "startTime": "2010-06-28T17:50:51"
      },
      {
         "participantAddress": "tel:+4412345678901",
         "participantName": "Peter E. Xample",
         "participantStatus": "CallParticipantInitial",
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt002"
      }
   ],
   "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001",
   "terminated": "false"
}}
```

D.3 Creating a “plain” call session, response with location of created resource (section 5.4.5.2)

Request:

```
POST /exampleAPI/1/thirdpartycall/callSessions HTTP/1.1
Content-Type: application/json
Accept: application/json
Content-Length: nnnn
Host: example.com:80

{"callSessionInformation": {
   "clientCorrelator": "104567",
   "participant": [
      {
         "participantAddress": "tel:+4912345678901",
         "participantName": "Max Muster"
      },
      {
         "participantAddress": "tel:+4412345678901",
         "participantName": "Peter E. Xample"
      }
   ]
}}
```

Response:

```
HTTP/1.1 201 Created
Content-Type: application/json
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"resourceReference": {"resourceURL": " http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001"}}
```

D.4 Creating a call session, setting up announcements and subscribing to notifications (section 5.4.5.3)

Request:

```
POST /exampleAPI/1/thirdpartycall/callSessions HTTP/1.1
Content-Type: application/json
Accept: application/json
Content-Length: nnnn
Host: example.com:80

{"callSessionInformation": {
   "callbackReference": {"notifyURL": "http://application.example.com/notifications/NotificationURL"},
   "clientCorrelator": "304567",
   "originatorAnnouncement": "predefinedAnnouncement1ForOriginator",
   "participant": [
      {
         "participantAddress": "tel:+4912345678901",
         "participantName": "Max Muster"
      },
      {
         "participantAddress": "tel:+4412345678901",
         "participantName": "Peter E. Xample"
      }
   ],
   "participantAnnouncement": "predefinedAnnouncement1ForParticipant"
}}
```

Response:

```
HTTP/1.1 201 Created
Content-Type: application/json
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"callSessionInformation": {
   "callbackReference": {"notifyURL": "http://application.example.com/notifications/NotificationURL"},
   "clientCorrelator": "104567",
   "originatorAnnouncement": "predefinedAnnouncement1ForOriginator",
   "participant": [
```

```
      {
         "participantAddress": "tel:+4912345678901",
         "participantName": "Max Muster",
         "participantStatus": "CallParticipantConnected",
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003/participants/pt001",
         "startTime": "2010-06-28T17:50:51"
      },
      {
         "participantAddress": "tel:+4412345678901",
         "participantName": "Peter E. Xample",
         "participantStatus": "CallParticipantInitial",
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003/participants/pt002"
      }
   ],
   "participantAnnouncement": "predefinedAnnouncement1ForParticipant",
   "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs003",
   "terminated": "false"
}}
```


D.5 Retrieving call session information (section 5.5.3.1)

Request:

```
GET /exampleAPI/1/thirdpartycall/callSessions/cs001?resFormat=JSON HTTP/1.1
Host: example.com:80
```

Response:


```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"callSessionInformation": {
   "clientCorrelator": "104567",
   "participant": [
      {
         "participantAddress": "tel:+4912345678901",
         "participantName": "Max Muster",
         "participantStatus": "CallParticipantConnected",
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt001",
         "startTime": "2010-06-28T17:50:51"
      },
      {
         "participantAddress": "tel:+4412345678901",
         "participantName": "Peter E. Xample",
         "participantStatus": "CallParticipantInitial",
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt002"
      }
   ],
   "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs001",
   "terminated": "false"
}}
```

D.6 Terminating a call session (section 5.5.6.1)

Request:

```
DELETE /exampleAPI/1/thirdpartycall/callSessions/cs002 HTTP/1.1
Accept: application/json
Host: example.com:80
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"callSessionInformation": {
   "clientCorrelator": "204567",
   "participant": [
      {
         "duration": "135",
         "participantAddress": "tel:+1234567890123",
         "participantName": "Mary E. Xample ",
         "participantStatus": "CallParticipantTerminated",
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt001",
         "startTime": "2010-06-28T17:50:51",
         "terminationCause": "CallParticipantAborted"
      },
      {
         "clientCorrelator": "224567",
         "duration": "134",
         "participantAddress": "tel:+1567890123456",
         "participantName": "John E. Xample",
         "participantStatus": "CallParticipantTerminated",
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002",
         "startTime": "2010-06-28T17:51:51",
         "terminationCause": "CallParticipantAborted"
      }
   ],
   "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002",
   "terminated": "true"
}}
```

D.7 Terminating a call session without removing the status information (section 5.6.5.1)

Request:

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs001/terminate HTTP/1.1
Content-Type: application/json
Content-Length: nnnn
Accept: application/json
```

```
Host: example.com:80

{"terminationParameters": null}
```

Response:

```
HTTP/1.1 204 No Content
Date: Mon, 28 Jun 2010 17:51:59 GMT
```

D.8 Retrieving information about all call participants (section 5.7.3.1)

Request:

```
GET /exampleAPI/1/thirdpartycall/callSessions/cs002/participants HTTP/1.1
Accept: application/json
Host: example.com:80
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"callParticipantList": {
   "participant": [
      {
         "duration": "135",
         "participantAddress": "tel:+1234567890123",
         "participantName": "Mary E. Xample ",
         "participantStatus": "CallParticipantTerminated",
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt001",
         "startTime": "2010-06-28T17:50:51",
         "terminationCause": "CallParticipantAborted"
      },
      {
         "clientCorrelator": "224567",
         "duration": "134",
         "participantAddress": "tel:+1567890123456",
         "participantName": "John E. Xample",
         "participantStatus": "CallParticipantTerminated",
         "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002",
         "startTime": "2010-06-28T17:51:51",
         "terminationCause": "CallParticipantAborted"
      }
   ],
   "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants"
}}
```

D.9 Adding a participant to a call session, response with copy of created resource (section 5.7.5.1)

Request:

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs002/participants HTTP/1.1
Content-Type: application/json
Accept: application/json
Content-Length: nnnn
Host: example.com:80

{"callParticipantInformation": {
   "clientCorrelator": "224567",
   "participantAddress": "tel:+1567890123456",
   "participantName": "John E. Xample"
}}
```

Response:

```
HTTP/1.1 201 Created
Content-Type: application/json
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"callParticipantInformation": {
   "clientCorrelator": "224567",
   "participantAddress": "tel:+1567890123456",
   "participantName": "John E. Xample",
   "participantStatus": "CallParticipantInitial",
   "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002"
}}
```

D.10 Adding a participant to a call session, response with location of created resource (section 5.7.5.2)

Request:

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs002/participants HTTP/1.1
Content-Type: application/json
Accept: application/json
Content-Length: nnnn
Host: example.com:80

{"callParticipantInformation": {
   "clientCorrelator": "224567",
   "participantAddress": "tel:+1567890123456",
   "participantName": "John E. Xample"
}}
```

Response:

```
HTTP/1.1 201 Created
Content-Type: application/json
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"resourceReference": {
   "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002"
}}
```

D.11 Retrieving information about a call participant (section 5.8.3.1)

Request:

```
GET /exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002 HTTP/1.1
Accept: application/json
Host: example.com:80
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"callParticipantInformation": {
   "clientCorrelator": "224567",
   "participantAddress": "tel:+1567890123456",
   "participantName": "John E. Xample",
   "participantStatus": "CallParticipantConnected",
   "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002",
   "startTime": "2010-06-28T17:51:51"
}}
```

D.12 Deleting a participant from a call session (section 5.8.6.1)

Request:

```
DELETE /exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002 HTTP/1.1
Accept: application/json
Host: example.com:80
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"callParticipantInformation": {
   "clientCorrelator": "224567",
   "duration": "134",
   "participantAddress": "tel:+1567890123456",
   "participantName": "John E. Xample",
   "participantStatus": "CallParticipantTerminated",
   "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt002",
   "startTime": "2010-06-28T17:51:51",
   "terminationCause": "CallParticipantAborted"
}}
```

D.13 Transferring a participant from one call session to another (section 5.9.5.1)

Request:

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs001/participants/pt002/transfer HTTP/1.1
Content-Type: application/json
Accept: application/json
Content-Length: nnnn
Host: example.com:80

{"transferParameters": {
   "destinationCallSession": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002"
}}
```

Response:

```
HTTP/1.1 303 See Other
Content-Type: application/json
Location: http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt003
Content-Length: nnnn
Date: Mon, 28 Jun 2010 17:51:59 GMT

{"resourceReference": {
   "resourceURL": "http://example.com/exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt003"
}}
```

D.14 Deleting a participant from a call session without removing the status information (section 5.10.5.1)

Request:

```
POST /exampleAPI/1/thirdpartycall/callSessions/cs002/participants/pt001/terminate HTTP/1.1
Content-Type: application/json
Content-Length: nnnn
Accept: application/json
Host: example.com:80

{"terminationParameters": null}
```

Response:

```
HTTP/1.1 204 No Content
Date: Mon, 28 Jun 2010 17:51:59 GMT
```

Appendix E. Parlay X operations mapping (Informative)

The table below illustrates the mapping between REST resources/methods and Parlay X equivalent operations.

ParlayREST Resource	ParlayREST Method	ParlayREST Section reference	Parlay X equivalent operation
All call sessions	POST	5.4.5	makeCallSession
Individual call session	GET	5.5.3	getCallSessionInformation
Individual call session	DELETE	5.5.6	endCallSession
Call session termination	POST	5.6.5	endCallSession
All participants of a call session	POST	5.7.5	addCallParticipant
Individual call session participant	GET	5.8.3	getCallParticipantInformation
Individual call session participant	DELETE	5.8.6	deleteCallParticipant
Call session participant transfer	POST	5.9.5	transferCallParticipant
Call session participant termination	POST	5.10.5	deleteCallParticipant

Table 1: Parlay X operations mapping