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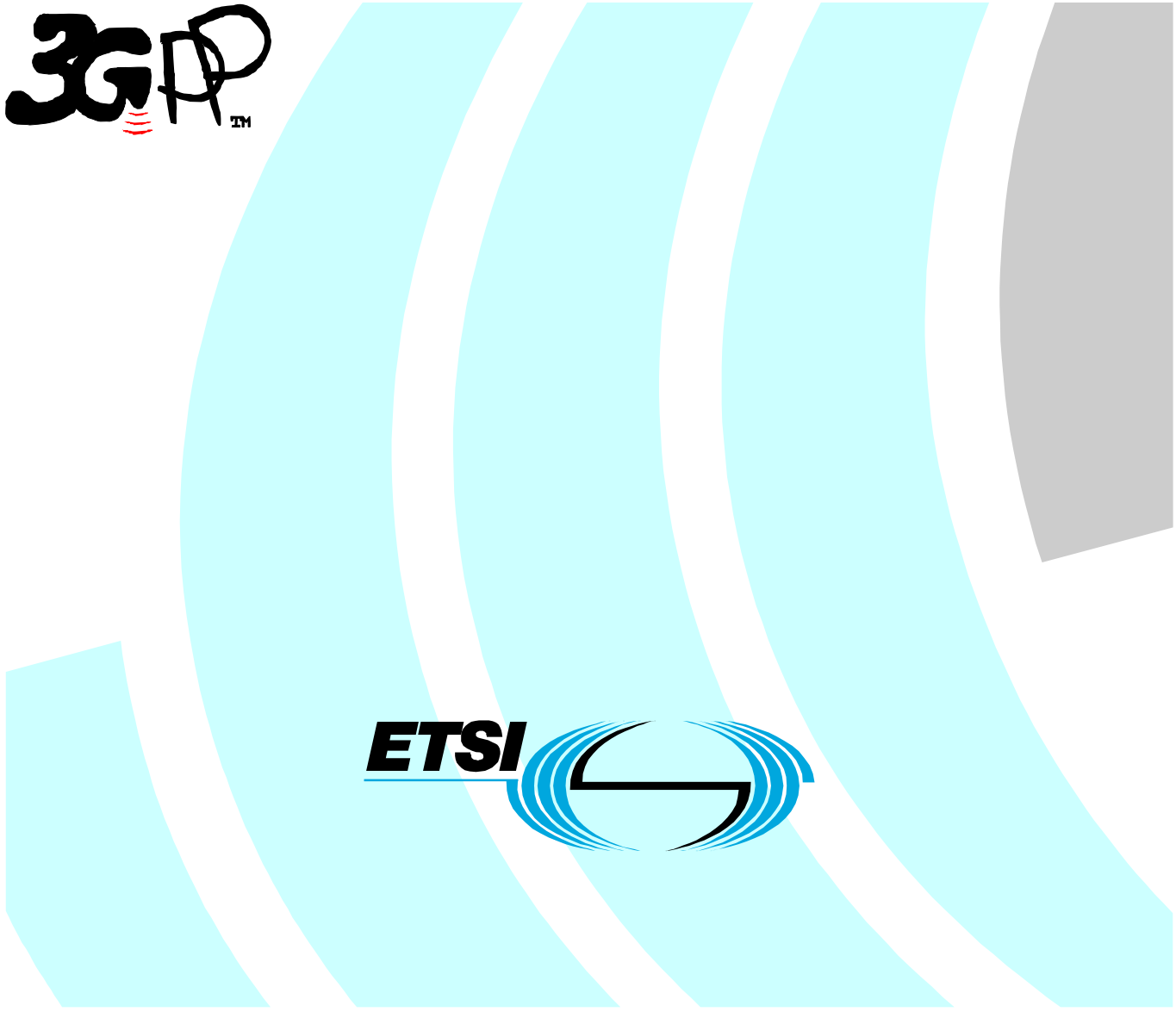
Technical Specification

Universal Mobile Telecommunications System (UMTS);
Open Service Access (OSA);
Parlay X web services;
Part 2: Third party call
(3GPP TS 29.199-02 version 6.3.0 Release 6)



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Foreword

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Foreword

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

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

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

Version x.y.z

where:

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

Introduction

The present document is part 2 of a multi-part deliverable covering the 3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Open Service Access (OSA); Parlay X Web Services, as identified below:

Part 1: "Common";
Part 2: "Third party call";
Part 3: "Call Notification";
Part 4: "Short Messaging";
Part 5: "Multimedia Messaging";
Part 6: "Payment";
Part 7: "Account management";
Part 8: "Terminal Status";
Part 9: "Terminal location";
Part 10: "Call handling";
Part 11: "Audio call";
Part 12: "Multimedia conference";
Part 13: "Address list management";
Part 14: "Presence".

1 Scope

The present document is Part 2 of the Stage 3 Parlay X Web Services specification for Open Service Access (OSA).

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

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

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

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

2 References

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

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

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

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

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

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

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

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

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

3 Definitions and abbreviations

3.1 Definitions

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

3.2 Abbreviations

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

4 Detailed service description

Currently, in order to perform a third party call in telecommunication networks we have to write applications using specific protocols to access Call Control functions provided by network elements (specifically operations to initiate a call from applications). This approach requires a high degree of network expertise. We can also use the OSA gateway approach, invoking standard interfaces to gain access to call control capabilities, but these interfaces are usually perceived to be quite complex by application IT developers. Developers must have advanced telecommunication skills to use Call Control OSA interfaces.

In this subclause we describe a Parlay X Web Service, Third Party Call, for creating and managing a call initiated by an application (third party call). The overall scope of this Web Service is to provide functions to application developers to create a call in a simple way. Using the Third Party Call Web Service, application developers can invoke call handling functions without detailed telecommunication knowledge.

Figure 1 shows an scenario using the Third Party Call Web Service to handle third party call functions. The application invokes a Web Service to retrieve stock quotes and a Parlay X Interface to initiate a third party call between a broker and his client.

In the scenario, whenever a particular stock quote reaches a threshold value (1) and (2), the client application invokes a third party call between one or more brokers and their corresponding customers to decide actions to be taken. After invocation (3) by the application, the Third Party Call Web Service invokes a Parlay API method (4) using the Parlay/OSA SCS-CC (Call control) interface. This SCS handles the invocation and sends a message (5) to an MSC to set-up a call between user A and user B.

In an alternative scenario, the Parlay API interaction involving steps (4) and (5) could be replaced with a direct interaction between the Third Party Call Web Service and the Mobile network.

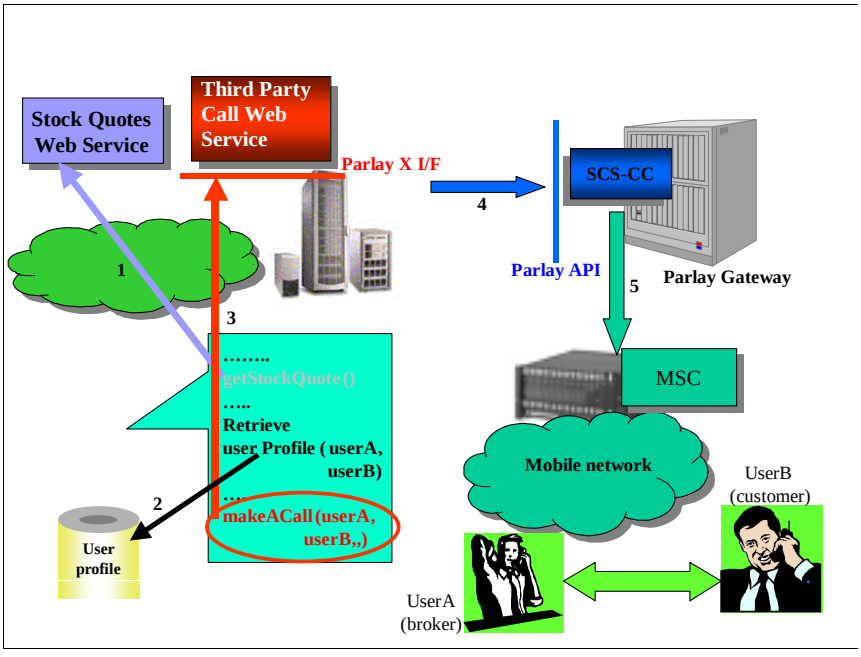


Figure 1: Third party call scenario

5 Namespaces

The ThirdPartyCall interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/third_party_call/v2_3

The data types are defined in the namespace:

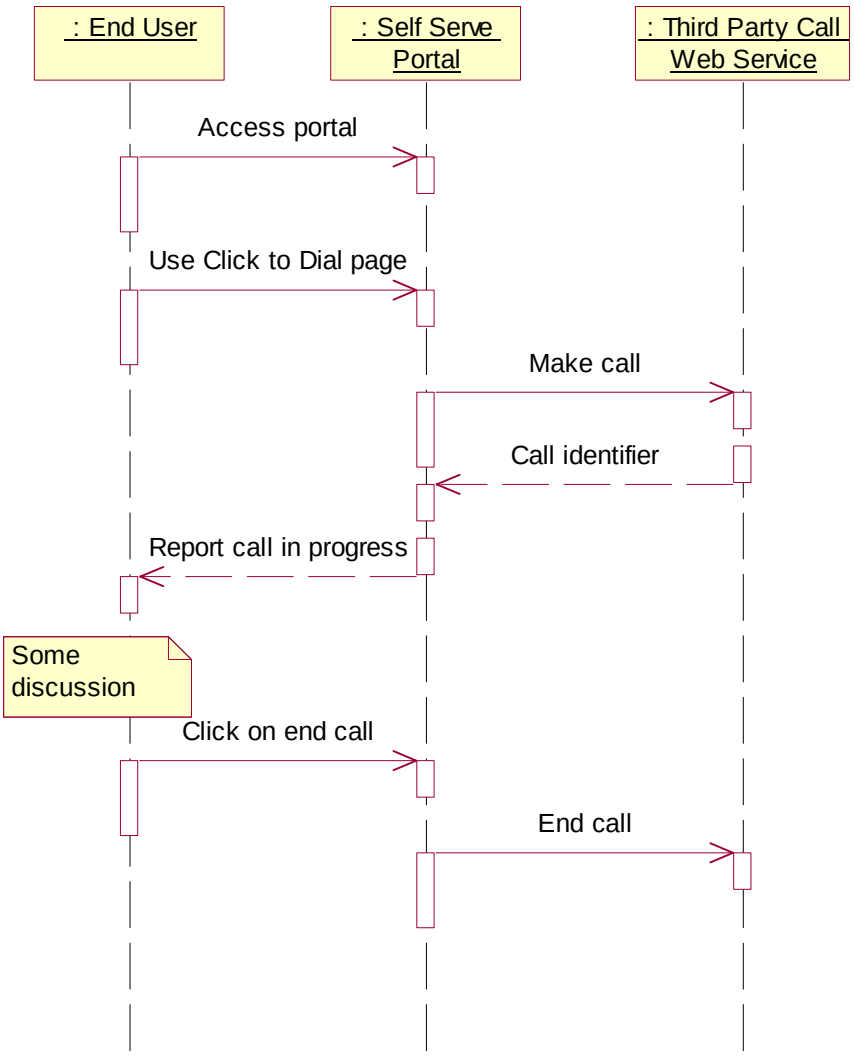
http://www.csapi.org/schema/parlayx/third_party_call/v2_3

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

6 Sequence diagrams

6.1 'Click to Dial' call setup

A common convergence application is Click to Dial, where a self service portal provides a web page that can initiate a call between two phones. This sequence shows a basic call setup, and ending the call through the portal.



7 XML Schema data type definition

7.1 CallStatus enumeration

List of call status values.

Enumeration	Description
CallInitial	The call is being established
CallConnected	The call is active
CallTerminated	The call was terminated

7.2 CallTerminationCause enumeration

List of call termination cause values.

Enumeration	Description
CallingPartyNoAnswer	Calling Party did not answer
CalledPartyNoAnswer	Called Party did not answer
CallingPartyBusy	Calling Party was busy
CalledPartyBusy	Called Party was busy
CallingPartyNotReachable	Calling Party was not reachable
CalledPartyNotReachable	Called Party was not reachable
CallHangUp	The call was terminated by either party hanging up
CallAborted	The call was aborted (any other termination cause)

7.3 CallInformation Structure

Call information for this call.

Element name	Element type	Optional	Description
CallStatus	CallStatus	No	It indicates the current status of the call (see possible values below)
StartTime	xsd:dateTime	Yes	When applicable (callStatus <> CallInitial), it indicates the time of the beginning of the call
Duration	xsd:int	Yes	When applicable (callStatus = CallTerminated), it indicates the duration of the call expressed in seconds
TerminationCause	CallTerminationCause	Yes	When applicable (callStatus = CallTerminated), it indicates the cause of the termination of the call

8 Web Service interface definition

8.1 Interface: ThirdPartyCall

This interface provides the ability to setup, end and determine the status of a call.

8.1.1 Operation: MakeCall

The invocation of **MakeCall** requests to set-up a voice call between two addresses, **CallingParty** and **CalledParty**, provided that the invoking application is allowed to connect them. Optionally the application can also indicate the charging information (**Charging**).

By invoking this operation the application may monitor the status of the requested call. The returned parameter, **CallIdentifier**, can be used to identify the call. In order to receive the information on call status the application has to explicitly invoke **GetCallInformation**.

8.1.1.1 Input message: MakeCallRequest

Part name	Part type	Optional	Description
CallingParty	xsd:anyURI	No	It contains the address of the first user involved in the call
CalledParty	xsd:anyURI	No	It contains the address of the second user involved in the call
Charging	common:ChargingInformation	Yes	Charge to apply to the call

8.1.1.2 Output message : MakeCallResponse

Part name	Part type	Optional	Description
result	xsd:string	No	It identifies a specific call request

8.1.1.3 Referenced faults

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

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

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

- POL0001 - Policy error.
- POL0008 - Charging not supported.

8.1.2 Operation: GetCallInformation

The invocation of **GetCallInformation** retrieves the current status, **CallInformation**, of the call identified by **CallIdentifier**. This method can be invoked multiple times by the application even if the call has already ended. However, after the call has ended, status information will be available only for a limited period of time that is specified in the service policy 'StatusRetentionTime'.

8.1.2.1 Input message: GetCallInformationRequest

Part name	Part type	Optional	Description
CallIdentifier	String	No	It identifies a specific call request

8.1.2.2 Output message : GetCallInformationResponse

Part name	Part type	Optional	Description
result	CallInformation	No	It identifies the status of the call

8.1.2.3 Referenced faults

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

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

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

- POL0001 - Policy error.

8.1.3 Operation: EndCall

The invocation of **EndCall** terminates the call identified by **CallIdentifier**. If the call is still in the initial state this method has the same effect as the **CancelCallRequest** method.

8.1.3.1 Input message: EndCallRequest

Part name	Part type	Optional	Description
CallIdentifier	String	No	It identifies a specific call request

8.1.3.2 Output message: EndCallResponse

Part name	Part type	Optional	Description
None			

8.1.3.3 Referenced faults

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

- SVC0001 - Service error.
- SVC0002 - Invalid input value.
- SVC0261 - Call already terminated.

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

- POL0001 - Policy error.

8.1.4 Operation: CancelCall

The invocation of **CancelCallRequest** cancels the previously requested call identified by **CallIdentifier**. Note that this method differs from the **EndCall** method since it only attempts to prevent the call from starting but it does not have any effect if the call has already started.

8.1.4.1 Input message: CancelCallRequest

Part name	Part type	Optional	Description
CallIdentifier	String	No	It identifies a specific call request

8.1.4.2 Output message: CancelCallResponse

Part name	Part type	Optional	Description
None			

8.1.4.3 Referenced faults

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

- SVC0001 - Service error.
- SVC0002 - Invalid input value.
- SVC0260 - Call already connected.

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

- POL0001 - Policy error.

9 Fault definitions

The following faults are defined for this service.

9.1 ServiceException

9.1.1 SVC0260: Call already connected

Part name	Description
Message Id	SVC0260
Text	Call has already been connected, it cannot be cancelled
Variables	None

9.1.2 SVC0261: Call already terminated

Part name	Description
Message Id	SVC0261
Text	Call has already been terminated
Variables	None

10 Service policies

These service policies are defined for the Third Party Call service.

Name	Type	Description
ChargingAllowed	xsd:boolean	Is charging allowed for makeCall operation
StatusRetentionTime	xsd:int	Length of time, in seconds, to retain status after the termination of the call

Annex A (normative): WSDL for Third Party Call

The document/literal WSDL representation of this interface specification is compliant to 3GPP TS 29.199-1 [6] and is contained in text files (contained in archive 29199-02-630-doclit.zip) which accompanies the present document.

Annex B (informative): Change history

Change history								
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Cat**	**Old**	**New**
Dec 2003	CN_21	NP-030552	--	--	Submitted to CN#22 for Information	--	1.0.0	--
Jan 2004	--	--	--	--	Added The W3C WSDL representation of the APIs specified in the present document is contained in a set of files which accompany the present document: px0326rpcenc.zip px0326rpclit.zip	--	1.0.1	--
Jun 2004	CN_24	NP-040274	--	--	Split into multi-part specification. 29.199-0n, for n=1,2…9. Submitted to CN#24 for Information	--	1.0.3	--
Sep 2004	CN_25	NP-040360	--	--	Draft v200 submitted to TSG CN#25 for Approval.	--	2.0.0	6.0.0
Jun 2005	CT_28	CP-050221	0001	--	Optionals for Part 2	F	6.0.0	6.1.0
Dec 2005	CT_30	CP-050566	0002	--	Inconsistent part naming in PX response messages	F	6.1.0	6.2.0
Jun 2006	CT_32	CP-060198	0004	--	Change reference to OSA Stage 2 from 23.127 to 23.198	F	6.2.0	6.3.0
Jun 2006	CT_32	CP-060198	0005	--	Correction to WSDL files	F	6.2.0	6.3.0

History

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