Final draft ETSI ES 202 504-2 V1.1.1 (2008-02)

ETSI Standard

Open Service Access (OSA); Parlay X Web Services; Part 2: Third Party Call (Parlay X 3)

Reference
DES/TISPAN-01034-2-OSA

Keywords
API, OSA, service

ETSI

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Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN), and is now submitted for the ETSI standards Membership Approval Procedure.

The present document is part 2 of a multi-part deliverable covering Open Service Access (OSA); Parlay X 3 Web Services, as identified below:

Part 1: "Common";

Part 2: "Third Party Call";

Part 3: "Call Notification";

Part 4: "Short Messaging";

Part 5: "Multimedia Messaging";

Part 6: "Payment";

Part 7: "Account Management";

Part 8: "Terminal Status";

Part 9: "Terminal Location";

Part 10: "Call Handling";

Part 11: "Audio Call";

Part 12: "Multimedia Conference";

Part 13: "Address List Management";

Part 14: "Presence";

Part 15: "Message Broadcast";

Part 16: "Geocoding";

Part 17: "Application-driven Quality of Service (QoS)";

Part 18: "Device Capabilities and Configuration";

Part 19: "Multimedia Streaming Control";

Part 20: "Multimedia Multicast Session Management".

The present document is equivalent to 3GPP TS 29.199-02 V7.4.0 (Release 7).

1 Scope

The present document is part 2 of the Stage 3 Parlay X 3 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 present document specifies the Third Party Call Web Service. The following are defined here:

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

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

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NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

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

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

[2] ETSI ES 202 504-1: "TISPAN; Open Service Access (OSA); Parlay X Web Services; Part 1: Common (Parlay X 3)".

[3] ETSI ES 202 504-12: "TISPAN; Open Service Access (OSA); Parlay X Web Services; Part 12: Multimedia Conference (Parlay X 3)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 202 504-1 [2] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ES 202 504-1 [2] 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 clause we describe a Parlay X 3 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.

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

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

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

An application setting up a call session must initially invoke the **makeCallSession**. The result of such invocation is the creation of a "context" that represents a call session with usually two participants, or at a minimum one participant connected; a unique identifier is assigned to the just-created call session. Subsequently the application may wish to add, remove, park or transfer call participants. In order to do so the operations **addCallParticipant, transferCallParticipant, deleteCallParticipant** can be used. Furthermore the call session or call participant status including the media details can be read. In order to do so the operations **getCallParticipantInformation,** and **getCallSessionInformation** can be used. It is also possible to retrieve only the media details using the **getMediaForParticipant** or **getMediaForCall** operations of the Audio Call web service.

The application can also force the call session and all its participants to be terminated with the operation **endCallSession**.

NOTE 2: A call session allows the application to avail of other web service features that can add value to the created call session. For example the Audio Call web service can provide multimedia message delivery to call participants in the call session (**playXxxMessage** operations) and furthermore control of the media types for the call participants thus enabling conversational multimedia communication including voice, video, chat, and data. Media can be added/removed for each participant.

Figure 1 shows a 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.

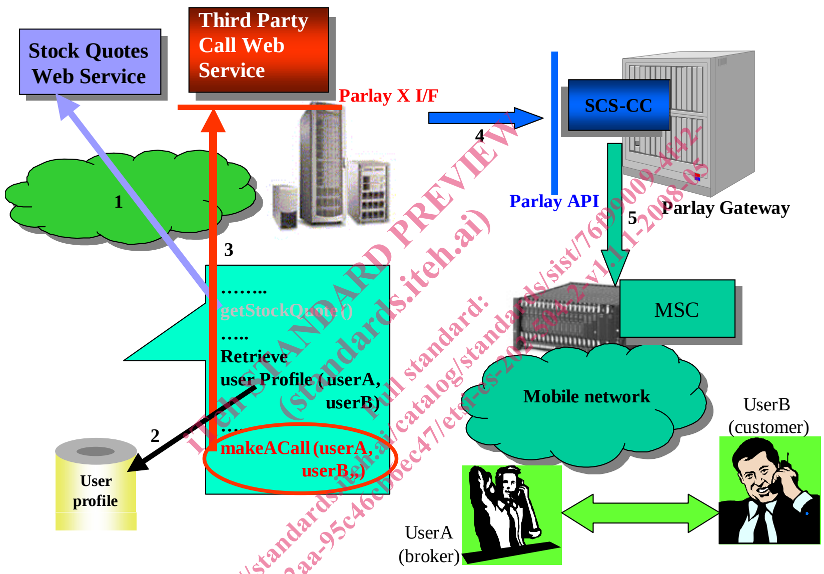

Figure 1: Third party call scenario

5 Namespaces

The ThirdPartyCall interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/third_party_call/v3_4

The 'xsd' namespace is used in the present document to refer to the XML Schema data types defined in XML Schema [1]. 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.

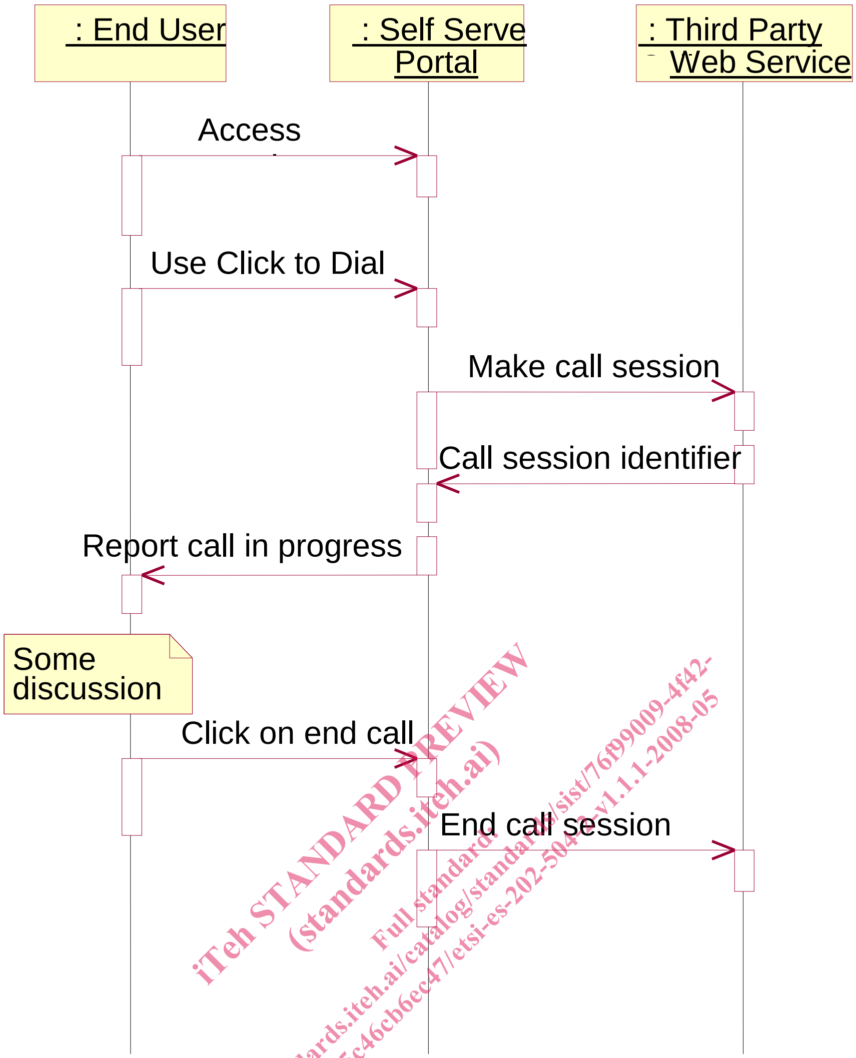

Figure 2

7 XML Schema data type definition

None.

8 Web Service interface definition

8.1 Interface: ThirdPartyCall

This interface provides the ability to setup a call session, add and delete a call participant, transfer a call participant from one call session into another call session, determine the status of an individual call participant or a complete call session, and finally to end a call session.