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ETSI Standard

Open Service Access (OSA); Parlay X Web Services; Part 3: Call Notification (Parlay X 3)



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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).

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

- Part 1: "Common";
- Part 2: "Third Party Call";
- Part 3: "Call Notification";**
- Part 4: "Short Messaging";
- Part 5: "Multimedia Messaging";
- Part 6: "Payment";
- Part 7: "Account Management";
- Part 8: "Terminal Status";
- Part 9: "Terminal Location";
- Part 10: "Call Handling";
- Part 11: "Audio Call";
- Part 12: "Multimedia Conference";
- Part 13: "Address List Management";
- Part 14: "Presence";
- Part 15: "Message Broadcast";
- Part 16: "Geocoding";
- Part 17: "Application-driven Quality of Service (QoS)";
- Part 18: "Device Capabilities and Configuration";
- Part 19: "Multimedia Streaming Control";
- Part 20: "Multimedia Multicast Session Management".

The present document has been defined jointly between ETSI, The Parlay Group (<http://www.parlay.org>) and the 3GPP.

The present document forms part of the Parlay X 3.0 set of specifications.

The present document is equivalent to 3GPP TS 29.199-03 V7.2.0 (Release 7).

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1 Scope

The present document is part 3 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 Call Notification 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.

- For a specific reference, subsequent revisions do not apply.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
 - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
 - for informative references.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

For online referenced documents, information sufficient to identify and locate the source shall be provided. Preferably, the primary source of the referenced document should be cited, in order to ensure traceability. Furthermore, the reference should, as far as possible, remain valid for the expected life of the document. The reference shall include the method of access to the referenced document and the full network address, with the same punctuation and use of upper case and lower case letters.

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: "Open Service Access (OSA); Parlay X Web Services; Part 1: Common (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 determine the handling of a subscriber initiated call in telecommunication networks we have to write applications using specific protocols to access Call Control functions provided by network elements. 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 will describe a Parlay X Web Service, Call Notification, for handling calls initiated by a subscriber in the network. A (third party) application determines how the call should be treated. The overall scope of this Web Service is to provide simple functions to application developers to determine how a call should be treated. It is possible to request to end the call, continue the call or re-route the call. Optionally, it is also possible to request the media type(s) when the action is to re-route the call. It provides, for example, the capability to route a call to an IVR in order to play a video stream to the calling subscriber. A service policy determines if multimedia application control is supported.

The media types used in the call can be retrieved using the **getMediaForParticipant** or **getMediaForCall** operations of the Audio Call web service.

Using the Web Services, application developers can perform simple handling of network-initiated calls without specific Telco knowledge.

Examples of usage include the following:

Incoming call handling: A subscriber receives a call while he is logged-on to the Internet. Since this occupies his telephone connection, he is regarded as busy by the network. The subscriber has an application that is invoked when somebody tries to call him while he is busy. The application provides the subscriber with a list of choices on how to handle the call (e.g. route the call to voicemail or other media server, redirect the call to a secretary, reject the call). Based on the response of the subscriber the call is handled in the network. Alternatively, the call is re-routed or released depending on the preferences of the subscriber and some context information (e.g. based on the status or location of the subscriber).

Service numbers: An application is triggered whenever a certain service number is dialled. This number is used to connect the caller to one of the maintenance personnel. The application redirects the call to the appropriate maintenance person based on, e.g. calling party number, time, location and availability of the maintenance personnel.

SMS notification of missed calls: An application offers the subscriber the possibility to be notified via SMS whenever he misses a call. The application registers to be notified when calls to its subscribers encounter busy, no-answer or not-reachable. The application does not influence the call treatment, but sends an SMS containing the calling party number, the time and reason why the call was missed.

MediaInteraction: An application is provided information regarding the start of a media stream to an end user, the termination of a media stream that the end user is watching, and other media events, e.g. the end-user pausing playback of a media stream. For example, starting to stream a video to an end user, the end user pausing the ongoing video stream and the ending of the video stream.

5 Namespaces

The CallDirection interface uses the namespace:

`http://www.csapi.org/wsd/parlayx/call_direction/v3_2`

The CallDirectionNotificationManager interface uses the namespace:

`http://www.csapi.org/wsd/parlayx/call_direction/notification_manager/v3_1`

The CallNotification interface uses the namespace:

`http://www.csapi.org/wsd/parlayx/call_notification/v3_2`

The CallNotificationManager interface uses the namespace:

`http://www.csapi.org/wsd/parlayx/call_notification/notification_manager/v3_2`

The data types are defined in the namespace:

`http://www.csapi.org/schema/parlayx/call_notification/v3_1`

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 SMS notification of a missed call

Showing the use of the CallNotification and Short Messaging Web Services, an SMS is sent to a person who misses a call (no answer). This sequence assumes that the provisioning of the "no answer" call notification has occurred independently.

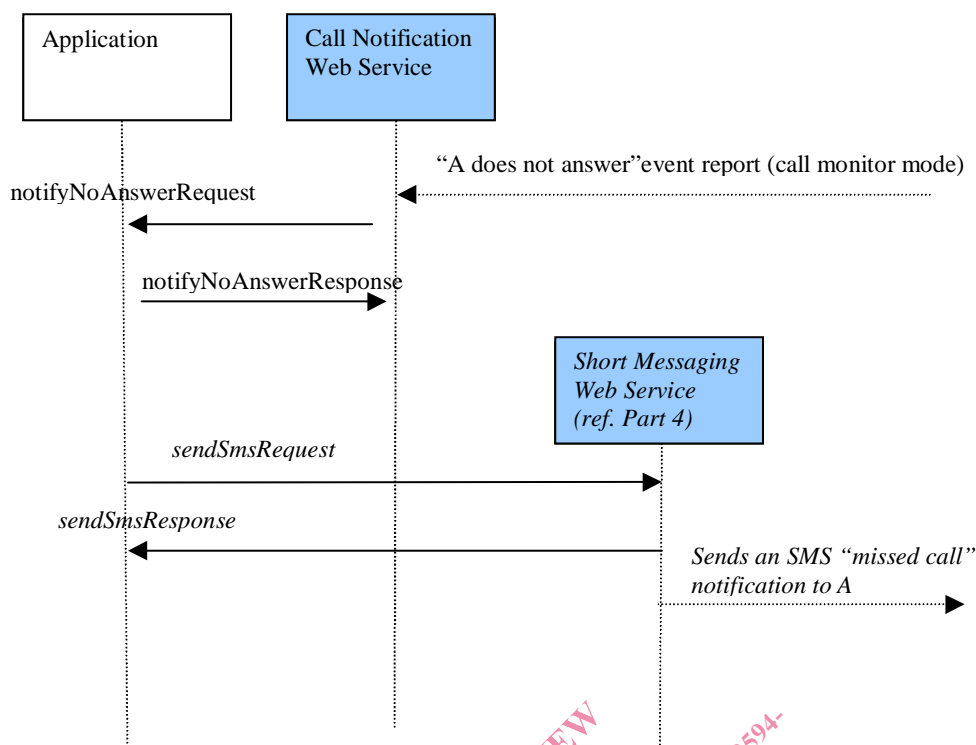


Figure 1

6.2 Media interaction – Collection of digits from end user

The application requests the CallNotificationManager to start the process of receiving media notifications. In this example the application requests to receive notifications for the playing of a file and the network collecting digits from the end user.

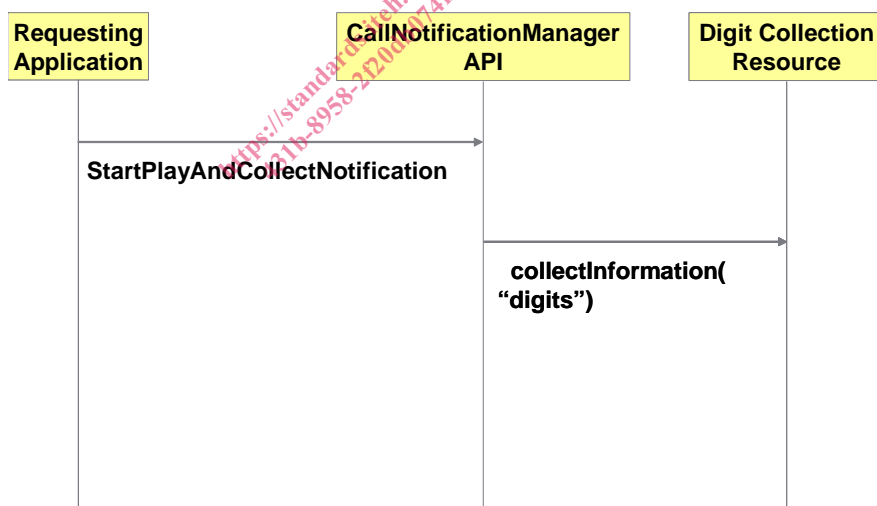


Figure 2