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Open Service Access (OSA) - Parlay X Web Services - Part 20: Multimedia Multicast Session Management (Parlay X 3)

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Open Service Access (OSA); Parlay X Web Services; Part 20: Multimedia Multicast Session Management (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 20 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".**

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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 29.199-20 V7.0.2 (Release 7).

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1 Scope

The present document is part 20 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 Multimedia Multicast Session Management 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>.

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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: "Open Service Access (OSA); Parlay X Web Services; Part 1: Common (Parlay X 3)".
- [3] ETSI ES 202 504-19: "Open Service Access (OSA); Parlay X Web Services; Part 19: Multimedia Streaming Control (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] and the following apply:

Multicast joining: the process by which a user joins a multicast group

Multicast session: The group for providing the same multicast service. The end user joins the multicast session to become the member of the multicast session.

Multicast service: A unidirectional point-to-multipoint service in which data is efficiently transmitted from a single source to a multicast group in the associated multicast service area. Multicast services can only be received by such members that are subscribed to the specific multicast service and have joined the multicast group associated with the specific service.

Member: the user becomes a member of a multicast group after he/she joined to the multicast group

Channel presence information: consists of a set of attributes that characterize a multicast session such as user identifiers and the multicast session in which they are participating

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ES 202 504-1 [2] and the following apply:

BM-SC	Broadcast Multicast Service Centre
GGSN	Gateway GPRS Support Node
IPTV	Internet Protocol Television
MBMS	Multimedia Broadcast/Multicast Service
SGSN	Serving GPRS Support Node

4 Detailed service description

The Multimedia Multicast Session Management Web Service allows for a third party (e.g. application) to control a multicast session, its members and multimedia stream, and obtain channel presence information.

The Multimedia Multicast Session Management is a simple Web Service consisting of three interfaces:

- **Multicast:** the management of sessions and user participation in sessions
- **Multicast Notification:** delivering channel presence information events to the application, as users join or leave multicast sessions
- **Multicast Notification Manager:** providing on-line set up and tear down of notifications for channel presence information events

NOTE: For control of a multimedia stream associated with a multicast session (e.g. start/stop/pause/resume), a third party (e.g. application) invokes the appropriate operations defined in ES 202 504-19 [3].

The GPRS Packet network or IP Multicast Network delivers multimedia multicast streams from a multimedia source to users who are already participating in multicast sessions. The basic scenario is as follows:

An application creates a multicast session for personal broadcasting and plays the multicast stream. A unique identifier (i.e. multicast address) is assigned to the just-created multicast session. The user participating in the multicast session for personal broadcasting may wish to invite their friends to participate in the session. If the invited friends accept this invitation request, they see the same program for personal broadcasting on their terminals. They usually communicate with each other by using a multimedia over IP while they are participating in the same session. Furthermore the application monitors user participation status (i.e. joining or leaving the multicast session) using a notification mechanism. For example, if a friend has left the session, the application is notified.

5 Namespaces

The Multicast interface uses the namespace:

`http://www.csapi.org/wsd/parlayx/multicast/v3_0`

The MulticastNotificationManager interface uses the namespace:

`http://www.csapi.org/wsd/parlayx/multicast/notification_manager/v3_0`

The MulticastNotification interface uses the namespace:

`http://www.csapi.org/wsd/parlayx/multicast/notification/v3_0`

The data types are defined in the namespace:

`http://www.csapi.org/schema/parlayx/multicast/v3_0`

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.

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6 Sequence diagrams

6.1 Create Multicast Session

