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ETSI Standard

Open Service Access (OSA); Parlay X Web Services; Part 5: Multimedia Messaging (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 5 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".

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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 29.199-05 V7.2.0 (Release 7).

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1 Scope

The present document is part 5 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 Messaging 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] W3C Note (11 December 2000): "SOAP Messages with Attachments".

NOTE: Available at: <http://www.w3.org/TR/SOAP-attachments>.

[4] IETF RFC 2822: "Internet Message Format".

NOTE: Available at: <http://www.ietf.org/rfc/rfc2822.txt>

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:

Whitespace: See definition for CFWS as defined in RFC 2822 [4].

3.2 Abbreviations

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

EMS	Enhanced Messaging Service
IM	Instant Messaging
MMS	Multimedia Messaging Service
MMS-C	Multimedia Messaging Service-Centre
OMA	Open Mobile Alliance
SMS	Short Message Service
WAP	Wireless Application Protocol

4 Detailed service description

Currently, in order to programmatically receive and send Multimedia Messages, it is necessary to write applications using specific protocols to access MMS functions provided by network elements (e.g. MMS-C). This approach requires application developers to have a high degree of network expertise.

This contribution defines a Multimedia Messaging Web Service that can map to SMS, EMS, MMS, IM, E-mail, etc.

The choice is between defining one set of interfaces per messaging network or a single set common to all networks; e.g. we could define sendMMS, sendEMS, sendSMS, etc., or just use sendMessage. Although the more specific the API the easier it is to use, there are advantages to a single set of network-neutral APIs. These advantages include:

- improved service portability;
- lower complexity, by providing support for generic user terminal capabilities only.

For this version of the Parlay X 3 specification, we provide sets of interfaces for two messaging Web Services: Short Messaging (part 4) and Multimedia Messaging (the present document), which provides generic messaging features (including SMS).

Multimedia Messaging provides operations (see clause 8.1, **SendMessage** API) for sending a Multimedia message to the network and a polling mechanism for monitoring the delivery status of a sent Multimedia message. It also provides an asynchronous notification mechanism for delivery status (see clause 8.3, **MessageNotification** API). In addition, a mechanism is provided to start and stop the notification of delivery receipts (see clause 8.4, **MessageNotificationManager** API).

Multimedia Messaging also allows an application to receive Multimedia messages. Both a polling (see clause 8.2, **ReceiveMessage** API) and an asynchronous notification mechanism (see clause 8.3, **MessageNotification** API and clause 8.4, **MessageNotificationManager** API) are available.

Figure 1 shows an example scenario using **sendMessage** and **getMessageDeliveryStatus** to send data to subscribers and to determine if the data has been received by the subscriber. The application invokes a Web Service to retrieve a stock quote (1) and (2) and sends the current quote - **sendMessage** - using the Parlay X Interface (3) of the Multimedia Messaging Web Service. After invocation, the Multimedia Message Web Service sends the message to an MMS-C using the MM7 interface (4) for onward transmission (5) to the subscriber over the Mobile network.

Later, when the next quote is ready, the application checks to see - **getMessageDeliveryStatus** - if the previous quote has been successfully delivered to the subscriber. If not, it may for instance perform an action (not shown) to provide a credit for the previous message transmission. This way, the subscriber is only charged for a stock quote if it is delivered on time.

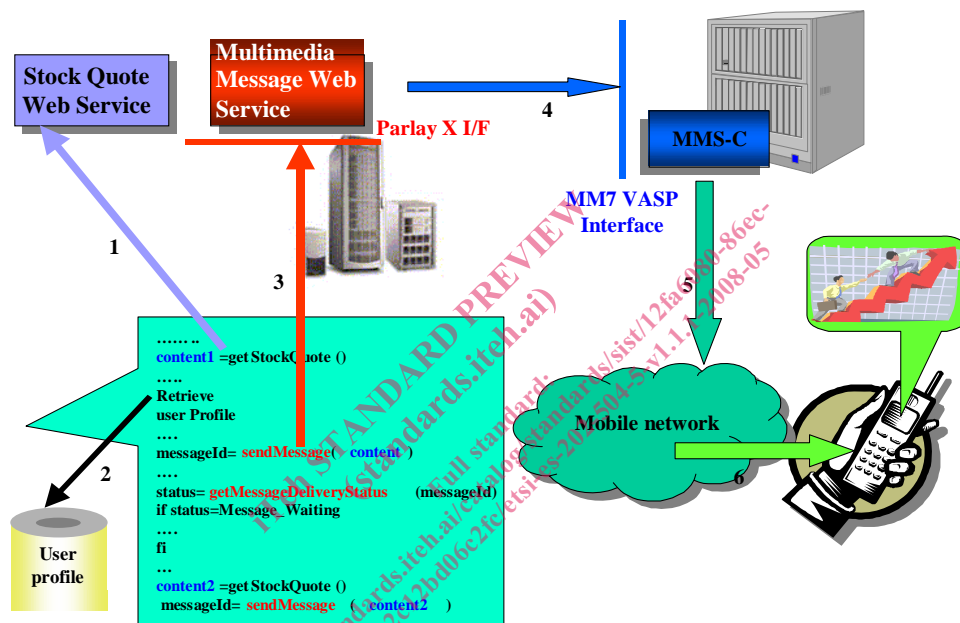


Figure 1: Multimedia Messaging Scenario

Alternatively this service could have been built using WAP Push features in the network.

Figure 2 shows an example scenario using **sendMessage** and **getMessageDeliveryStatus** to send a link to subscribers and to determine if the data has been received by the subscriber. The application invokes a Web Service to generate a stock quote graph (1) and (2) and sends the current quote as a WAP Push link - **sendMessage** - using the Parlay X Interface (3) of the Multimedia Messaging Web Service. After invocation, the Multimedia Message Web Service sends the message to an SMS-C (4) for onward transmission (5) to the subscriber over the Mobile network. The subscriber can then open the link and access his content.

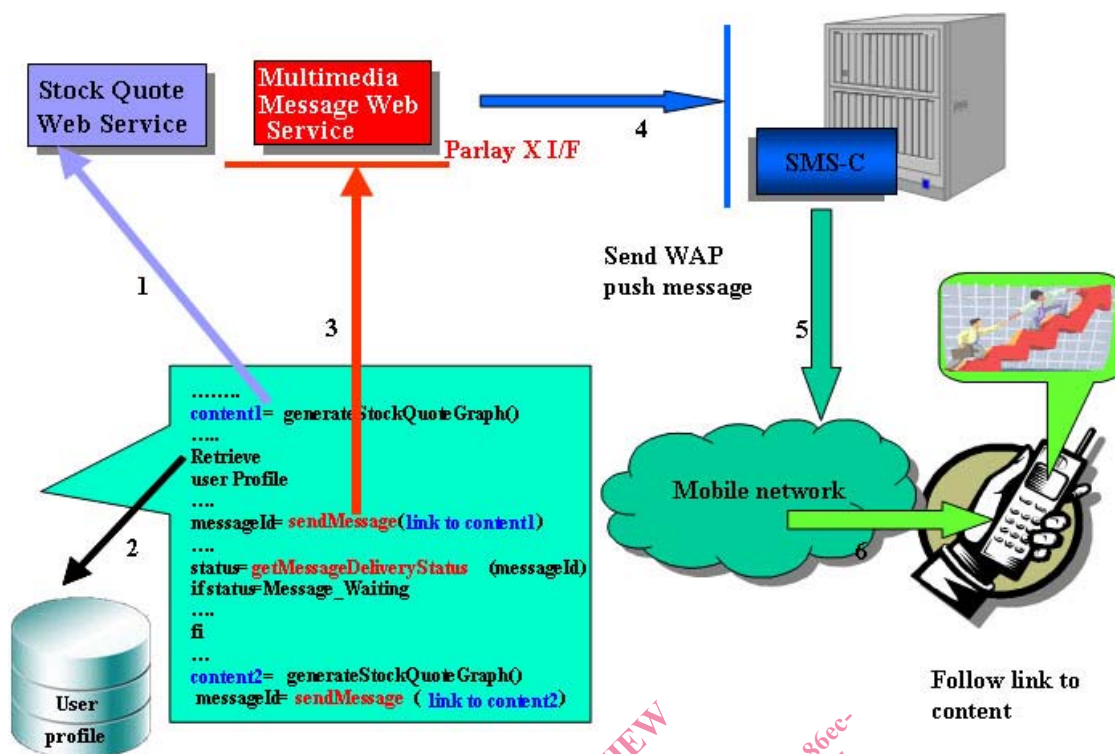


Figure 2: WAP Push scenario

5 Namespaces

The SendMessage interface uses the namespace:

http://www.csapi.org/wsd/parlayx/multimedia_messaging/send/v3_1

The ReceiveMessage interface uses the namespace:

http://www.csapi.org/wsd/parlayx/multimedia_messaging/receive/v3_1

The MessageNotification interface uses the namespace:

http://www.csapi.org/wsd/parlayx/multimedia_messaging/notification/v3_1

The MessageNotificationManager interface uses the namespace:

http://www.csapi.org/wsd/parlayx/multimedia_messaging/notification_manager/v3_2

The data types are defined in the namespace:

http://www.csapi.org/schema/parlayx/multimedia_messaging/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.

6 Sequence diagrams

6.1 Send picture

With the advent of picture capable phones, the exchange of photos to mobile phones is becoming more common place. This sequence diagram shows an application where a person can send a picture from an online photo album to a mobile phone.