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Reference

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Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

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 4 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".

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 2.2 set of specifications.

The present document is equivalent to 3GPP TS 29.199-04 V6.8.0 (Release 6).

1 Scope

The present document is part 4 of the Stage 3 Parlay X 2 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 Short 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:
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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 202 391-1: "Open Service Access (OSA); Parlay X Web Services; Part 1: Common (Parlay X 2)".

[3] ETSI TS 123 040: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Technical realization of Short Message Service (SMS) (3GPP TS 23.040)".

[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 202 391-1 [2] and the following apply:

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

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ES 202 391-1 [2] and the following apply:

SMS Short Message Service
SMS-C Short Message Service - Centre

4 Detailed service description

Currently, in order to programmatically receive and send SMS it is necessary to write applications using specific protocols to access SMS functions provided by network elements (e.g. SMS-C). This approach requires a high degree of network expertise. Alternatively it is possible to use the Parlay/OSA approach, invoking standard interfaces (e.g. User Interaction or Messaging Service Interfaces) to gain access to SMS capabilities, but these interfaces are usually perceived to be quite complex by IT application developers. Developers must have advanced telecommunication skills to use OSA interfaces.

In this clause is described a Parlay X 2 Web Service, for sending and receiving SMS messages. The overall scope of this Web Service is to provide to application developers primitives to handle SMS in a simple way. In fact, using the SMS Web Service, application developers can invoke SMS functions without specific Telco knowledge.

ShortMessaging provides operations (see clause 8.1, SendSms API) for sending an SMS message to the network and a polling mechanism for monitoring the delivery status of a sent SMS message. It also provide an asynchronous notification mechanism for delivery status (see clause 8.2.2, SmsNotification API: notifySmsDeliveryReceipt operation).

ShortMessaging also allows an application to receive SMS messages. Both a polling (see clause 8.3, ReceiveSms API) and an asynchronous notification mechanism (see clause 8.2.1, SmsNotification API: notifySmsReception operation and clause 8.4, SmsNotificationManager API) are available.

Figure 1 shows a scenario using the SMS Web Service to send an SMS message from an application. The application invokes a Web Service to retrieve a weather forecast for a subscriber (1) and (2) and a Parlay X 2 Interface (3) to use the SMS Web Service operations (i.e. to send an SMS). After invocation, the SMS Web Service invokes a Parlay API method (4) using the Parlay/OSA SCS (Generic User Interaction) interface. This SCS handles the invocation and sends an UCP operation (5) to an SMS-C. Subsequently the weather forecast is delivered (6) to the subscriber.

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

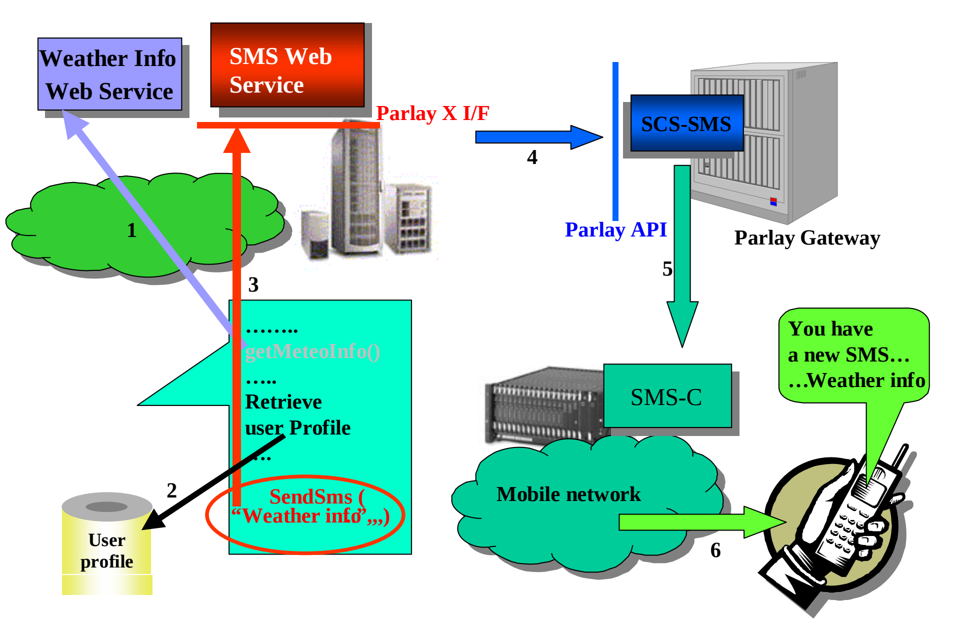

Figure 1: Send SMS Scenario

Figure 2 shows a scenario using the SMS Web Service to deliver a received SMS message to an application. The application receives a Parlay X 2 Web Service invocation for an SMS sent by a subscriber (1) and (2). The SMS message contains the e-mail address of the person the user wishes to call. The application invokes a Parlay X Interface (3) to the Third Party Call Web Service in order to initiate the call (4).

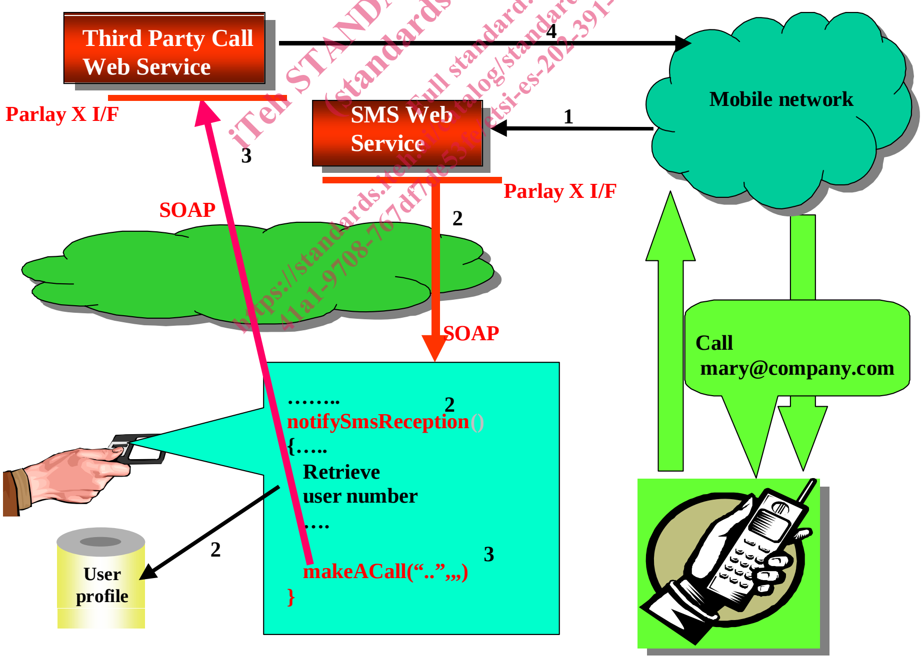

Figure 2: Receive SMS Scenario

5 Namespaces

The SendSms interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/sms/send/v2_3

The ReceiveSms interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/sms/receive/v2_3

The SmsNotification interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/sms/notification/v2_2

The SmsNotificationManager interface uses the namespace:

http://www.csapi.org/wsdl/parlayx/sms/notification_manager/v2_4

The data types are defined in the namespace:

http://www.csapi.org/schema/parlayx/sms/v2_2

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 SMS and report status

Sending SMS message from Web portals is a common capability offered by Service Providers. This sequence diagram shows a portal providing this service.

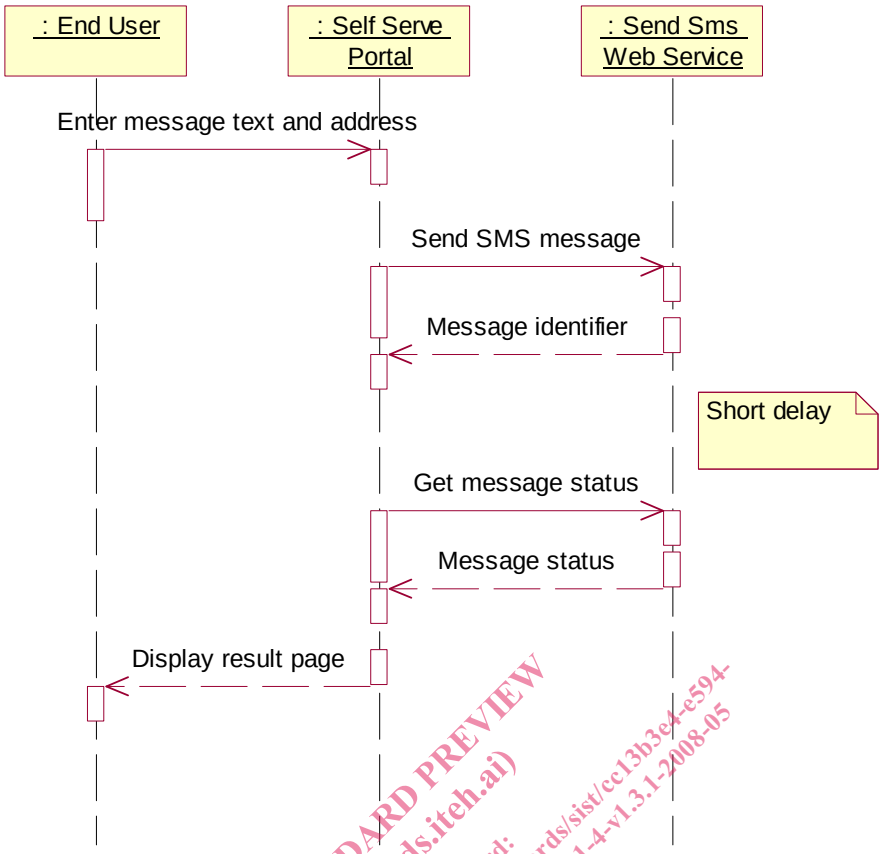

Figure 3

7 XML Schema data type definition

7.1 DeliveryStatus enumeration

List of delivery status values.

Enumeration value	Description
DeliveredToNetwork	Successful delivery to network.
DeliveryUncertain	Delivery status unknown: e.g. because it was handed off to another network.
DeliveryImpossible	Unsuccessful delivery; the message could not be delivered before it expired.
MessageWaiting	The message is still queued for delivery. This is a temporary state, pending transition to one of the preceding states.
DeliveredToTerminal	Successful delivered to Terminal
DeliveryNotificationNotSupported	Unable to provide delivery receipt notification. The **notifySMSDeliveryReceipt** operation will return "DeliveryNotificationNotSupported" to indicate that delivery receipt for the specified address in a **sendSMS…Request** message is not supported.