

**Open Service Access (OSA);
Mapping of Parlay X Web Services to Parlay/OSA APIs;
Part 4: Short Messaging Mapping;
Sub-part 1: Mapping to User Interaction**



Reference

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Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

The present document is part 4, sub-part 1, of a multi-part deliverable providing an informative mapping of Parlay X Web Services to the Parlay Open Service Access (OSA) APIs and, where applicable, to IMS, as identified below:

- Part 1: "Common Mapping";
- Part 2: "Third Party Call Mapping";
- Part 3: "Call Notification Mapping";
- Part 4: "Short Messaging Mapping";**
 - Sub-part 1: "Mapping to User Interaction";**
 - Sub-part 2: "Mapping to Multi-Media Messaging";
- Part 5: "Multimedia Messaging Mapping";
- Part 6: "Payment Mapping";
- Part 7: "Account Management Mapping";
- Part 8: "Terminal Status Mapping";
- Part 9: "Terminal Location Mapping";
- Part 10: "Call Handling Mapping";
- Part 11: "Audio Call Mapping";
- Part 12: "Multimedia Conference Mapping";
- Part 13: "Address list Management Mapping";
- Part 14: "Presence Mapping".

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

1 Scope

The Parlay X Web Services provide powerful yet simple, highly abstracted, imaginative, telecommunications functions that application developers and the IT community can both quickly comprehend and use to generate new, innovative applications.

The Open Service Access (OSA) specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e. the Parlay/OSA APIs.

The present document is part 4, sub-part 1, of an informative mapping of Parlay X Web Services to Parlay/OSA APIs.

The present document specifies the mapping of the Parlay X Short Messaging Web Service to the Parlay/OSA User Interaction Service Capability Feature (SCF).

2 References

For the purposes of this Technical Report (TR) the following references apply:

- [1] ETSI TR 121 905: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Vocabulary for 3GPP Specifications (3GPP TR 21.905)".
- [2] W3C Recommendation (2 May 2001): "XML Schema Part 2: Datatypes".
- NOTE: Available at <http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/>
- [3] ETSI TR 102 397-1: "Open Service Access (OSA); Mapping of Parlay X Web Services to Parlay/OSA APIs; Part 1: Common Mapping".
- [4] 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)".
- [5] 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 TR 102 397-1 [3] and the following apply:

Shortcode: Short telephone number, usually 4 to 6 digits long. This is represented by the 'tel:' URI defined in TR 102 397-1 [3].

Whitespace: See definition for CFWS as defined in RFC 2822 [5].

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 102 397-1 [3] and the following apply:

SMS Short Message Service

4 Mapping Description

The Short Messaging capability can be implemented with the Parlay/OSA User Interaction SCF.

It is applicable to ETSI OSA 1.x/2.x/3.x, Parlay/OSA 3.x/4.x/5.x and 3GPP Releases 4.x/5.x/6.x.

5 Sequence Diagrams

5.1 Send Short Message to One or More Addresses

This describes where an application sends a short message to one or more addresses. The use case is the same whether the message is text, ringtone or a logo, however a different operation on the Parlay X **SendSms** interface is used for each. For the diagram below replace **sendSms** with **sendSmsLogo** or **sendSmsRingtone** as appropriate.

1. Prior to processing any **sendSmsRequest** messages from the application, the web service creates an event notification with criteria identifying the application (**OriginatingAddress**) and the terminal delivery related states (**ServiceCode**).
2. The application requests the sending of a short message to multiple addresses using the **sendSms** operation. If the contents of the **sendSmsRequest** message are invalid for any reason, the appropriate service or policy exception is thrown. Otherwise, a **sendSmsResponse** message is returned to the application containing a unique identifier for this SMS delivery request and processing continues as described below.
3. The web service resolves all group addresses in the **addresses** part of the **sendSmsRequest** message to individual destination addresses. The web service creates a UI session for each individual destination address in the request.
4. The web service sends the message to each individual destination address and requests a message identifier (e.g. a network tracking number) using the **sendInfoAndCollectReq** method.
5. The application can invoke the **getSmsDeliveryStatus** operation at any time after it receives the **sendSmsResponse** message and use the unique identifier it received in this message to obtain the current delivery status for each individual destination address. At this stage, the status returned for each address is either **MessageWaiting** or, in the event of an error, **DeliveryImpossible**.
6. The web service processes an invocation of a **sendInfoAndCollectRes** method for each individual destination address, which contains a message identifier (e.g. a network tracking number).
7. After the web service processes the **sendInfoAndCollectRes** method invocation for a destination address, it releases the associated UI session objects created in step 3.
8. The application can invoke the **getSmsDeliveryStatus** operation. At this stage, the status returned for each individual destination address is one of the following:
 - **MessageWaiting**, if the **sendInfoAndCollectRes** method has not yet been invoked.
 - **DeliveryImpossible**, in the event an error occurred.
 - **DeliveredToNetwork**, if the **sendInfoAndCollectRes** method has been invoked.
 - **DeliveryUncertain**, otherwise.
9. The web service processes an invocation of a **reportEventNotification** method containing the message identifier (i.e. as received by the web service in step 6), the terminal delivery related status and the sent message. This method notifies the application of an occurred network event matching specific terminal delivery related status criteria, which were previously installed with an invocation (in step 1) of the **createNotification** method.
10. If the **receiptRequest** part of the associated, original **sendSmsRequest** message was present, and this capability is supported by the web service, then the web service invokes the **notifySmsDeliveryReceipt** operation to notify the application of the final status of the SMS delivery to an individual destination address.

11. The web service releases the associated UI session object created in step 9.
12. The application can invoke the **getSmsDeliveryStatus** operation. At this stage, the status returned for each individual destination address is one of the following:
 - **DeliveredToTerminal**, if this status is reported by the `reportEventNotification` method.
 - **MessageWaiting**, if the `sendInfoAndCollectRes` method has not yet been invoked.
 - **DeliveryImpossible**, in the event an error occurred.
 - **DeliveredToNetwork**, if the `sendInfoAndCollectRes` method, but not the `reportEventNotification` method, has been invoked.
 - **DeliveryUncertain**, otherwise.

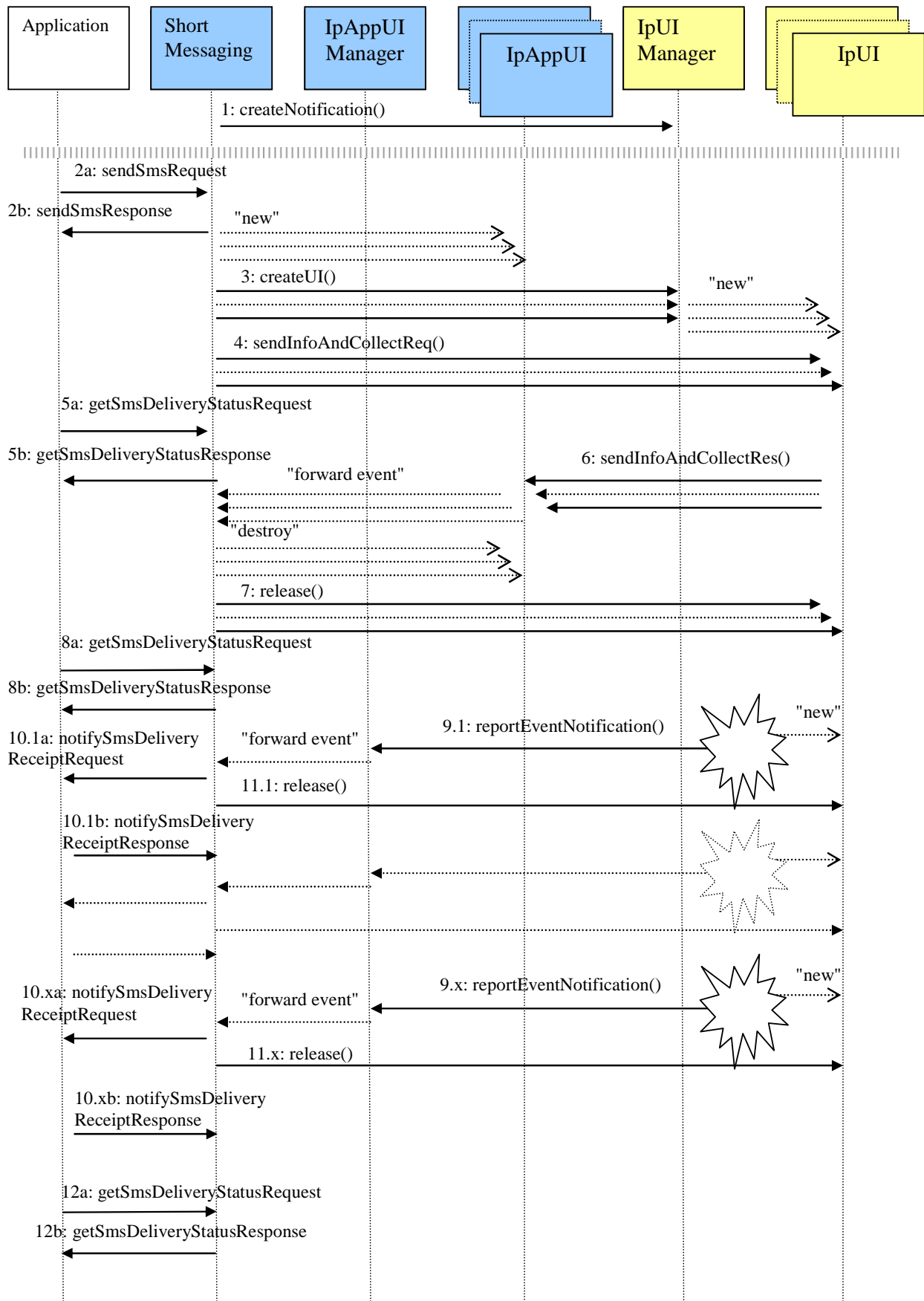


Figure 1

5.2 Notification of Short Message Reception and Retrieval

1. The application registers for the reception of short messages by invoking **startSmsNotification**. The request includes event criteria consisting of a value for the short message destination address (the **smsServiceActivationNumber** part) and an optional text string for matching against the first word of the message body (the **criteria** part); also a URI for a Web Service implementing the **SmsNotification** interface on the client application side, and a correlation value for identifying this event registration request.
 - Note that the application may also register offline for the reception of short messages: i.e. without using the Parlay X interface and the **startSmsNotification** operation. The registration request should at a minimum specify the message destination address. The request may also specify a URI for a Web Service implementing the **SmsNotification** interface on the client application side and/or the optional text string criteria. The registration request is assigned a unique registration identifier.
2. A check is made within the web service to see if a notification for the given short message destination address is active. If no notification is active, then the Short Messaging web service requests that a notification be created by the UI SCS; note that the optional text string criteria (for matching against the first word in the SMS body) is not sent to the UI SCS. Otherwise a notification is already active and the request is not made.
3. The UI SCS sends a `reportEventNotification` containing the message identifier, the message delivery status and the received message. The web service stores the short message information.
4. The web service releases the UI session within the notification and verifies the event satisfies all criteria specified in step 1, including matching the first word of the message body against the value of the optional text string criteria. If the event is verified, then it stores the received message and notifies the application (step 5); else the event is invalid (step 5 is skipped) and it discards the received message.
5. The web service notifies the application of the received short message information by invoking the **notifySmsReception** operation on the application Web Service.
6. Steps 3, 4 and 5 are repeated for any received message event matching the notification criteria. The application may invoke the **getReceivedSms** operation to request a list of received short messages matching a registration identifier associated with off-line provisioned notification criteria. The web service returns the list of any such messages and deletes them.
7. to 10. Repeat of steps 3 through 6. In step 10, only messages received by the web service during step 7, which match the registration identifier associated with off-line provisioned notification criteria, can be "bulk" retrieved by this **getReceivedSms** operation.
11. The application terminates an existing registration for the reception of short messages by invoking the **stopSMSNotification** operation. The request includes the same correlation value previously specified in the earlier **startSMSNotification** operation (step 1).
 - Note that the application may also deregister offline for the reception of short messages: i.e. without using the Parlay X interface and the **stopSmsNotification** operation. The deregistration request would specify the registration identifier associated with the original, offline registration operation (step 1).
12. A check is made within the web service to see if the registration identifier (correlation value) represents the last active notification for the corresponding destination address. If it is the last, then the web service requests that the notification be destroyed by the UI SCS. Otherwise at least one other notification (i.e. associated with a different text string criteria value) remains active for this destination address and the request is not made.

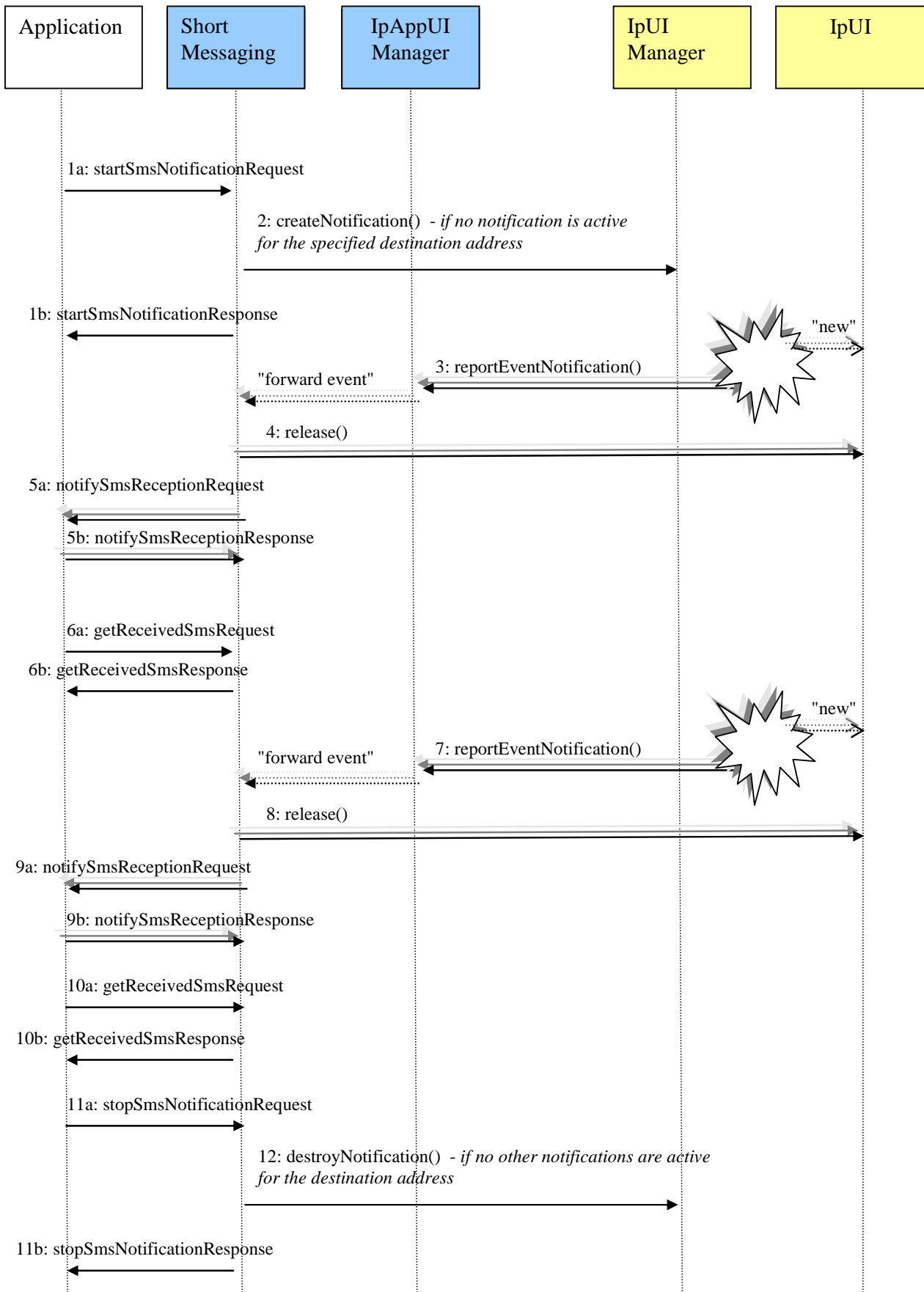


Figure 2

6 Detailed Mapping Information

6.1 Operations

6.1.1 sendSms

The sequence diagram in clause 5.1 Send Short Message to One or More Addresses (figure 1) illustrates the flow for the **sendSms** operation.

The **sendSms** operation is synchronous from the Parlay X client's point of view. It is mapped to the following Parlay/OSA methods:

- `IpUIManager.createNotification`
- `IpUIManager.createUI`
- `IpUI.sendInfoAndCollectReq`

6.1.1.1 Mapping to `IpUIManager.createNotification`

Prior to processing any **sendSmsRequest** messages from the application, the web service creates an event notification with criteria identifying the application (`OriginatingAddress`) and the terminal delivery related states (`ServiceCode`). The `IpUIManager.createNotification` method is invoked with the following parameters:

Name	Type	Comment
<code>appUIManager</code>	<code>IpAppUIManagerRef</code>	Reference to callback (internal)
<code>eventCriteria</code>	<code>TpUIEventCriteria</code>	The mapping to the <code>eventCriteria</code> parameter is as follows: <ul style="list-style-type: none"> • the <code>OriginatingAddress</code> element identifies the Parlay X application: e.g. as appropriate, the <code>Plan</code> element is assigned a value of <code>P_ADDRESS_PLAN_URL</code>, <code>P_ADDRESS_PLAN_SMTP</code>,... • the <code>DestinationAddress</code> element is not mapped: i.e. the <code>Plan</code> element is assigned a value of <code>P_ADDRESS_PLAN_ANY</code>. • the <code>ServiceCode</code> element, which defines a 2-digit code indicating the UI to be triggered, is set to an operator-specific value identifying one or more terminal delivery related status event(s) to be monitored.

The result from `IpUIManager.createNotification` is of type `TpAssignmentID` and is used internally to correlate the callbacks. Specifically it is used to correlate a future invocation of the `IpAppUIManager.reportEventNotification` method, which reports a terminal delivery related status event for SMS messages originated by this Parlay X application.

Parlay exceptions thrown by `IpUIManager.createNotification` indicate that the delivery receipt notification capability is not supported for this application. Subsequent **sendSmsRequest** messages from the application, containing the optional **receiptRequest** part will be rejected by the web service, i.e. by raising the exception **SVC0283: Delivery Receipt Notification not supported**.

6.1.1.2 Mapping to `IpUIManager.createUI`

The `IpUIManager.createUI` method is invoked with the following parameters:

Name	Type	Comment
<code>appUI</code>	<code>IpAppUIRef</code>	Reference to callback (internal)
<code>userAddress</code>	<code>TpAddress</code>	Specifies the address to which the SMS should be sent. It is constructed based on the URI provided in the addresses part of sendSmsRequest , mapped as described in TR 102 397-1 [3]

The result from `IpUIManager.createUI` is of type `TpUIIdentifier` and identifies the User Interaction interface objects upon which future methods are invoked: e.g. `IpUI.sendInfoAndCollectReq`.

Parlay exceptions thrown by `IpUIManager.createUI` are not mapped to Parlay X exceptions. Instead they are reported to the application in a **notifySmsDeliveryReceiptRequest** message and/or in a **getSmsDeliveryStatusResponse** message, with the following part values:

- [**notifySmsDeliveryReceiptRequest** message only] **correlator** has the value of the **correlator** element of the **receiptRequest** part of the **sendSmsRequest** message;
- the **deliveryStatus.address** element has the value of the address specified in the `userAddress` parameter of the `IpUIManager.createUI` method, mapped as described in TR 102 397-1 [3];
- the **deliveryStatus.deliveryStatus** element has the value: **DeliveryImpossible**.

6.1.1.3 Mapping to `IpUI.sendInfoAndCollectReq`

The `IpUI.sendInfoAndCollectReq` method is invoked with the following parameters:

Name	Type	Comment
userInteractionSessionID	TpSessionID	Not mapped. [The value provided in the result from <code>IpUIManager.createUI</code>].
info	TpUIInfo	Specifies the Short Message text to send. The <code>InfoData</code> element is constructed from the message part of sendSmsRequest .
language	TpLanguage	Not mapped.
variableInfo	TpUIVariableInfoSet	<ul style="list-style-type: none"> • Some mapping support for the optional charging part: i.e. it could be mapped to a <code>VariablePartPrice</code> element(s) of the <code>variableInfo</code> parameter. • Some mapping support for the optional senderName part: i.e. it could be mapped to a <code>VariablePartAddress</code> element of the <code>variableInfo</code> parameter.
criteria	TpUICollectCriteria	Not mapped. Specifies additional properties for the collection of information from the network: i.e. a message identifier for the Short Message.
responseRequested	TpUIResponseRequest	Not mapped. Set to <code>P_UI_RESPONSE_REQUIRED</code> .

The result from `IpUI.sendInfoAndCollectReq` is of type `TpAssignmentID` and is used internally to correlate the callbacks. Specifically it is used to correlate a future invocation of the `IpAppUI.sendInfoAndCollectRes` method.

Parlay exceptions thrown by `IpUI.sendInfoAndCollectReq` are not mapped to Parlay X exceptions. Instead they are reported to the application in a **notifySmsDeliveryReceiptRequest** message and/or in a **getSmsDeliveryStatusResponse** message, with the following part values:

- [**notifySmsDeliveryReceiptRequest** message only] **correlator** has the value of the **correlator** element of the **receiptRequest** part of the **sendSmsRequest** message;
- the **deliveryStatus.address** element has the value of the address specified in the `userAddress` parameter of the `IpUIManager.createUI` method, mapped as described in TR 102 397-1 [3];
- the **deliveryStatus.deliveryStatus** element has the value: **DeliveryImpossible**.

6.1.2 sendSmsLogo

The sequence diagram in clause 5.1 Send Short Message to One or More Addresses (figure 1) illustrates the flow for the **sendSms** operation. The flow for the **sendSmsLogo** operation is identical.

The **sendSmsLogo** operation is synchronous from the Parlay X client's point of view. It is mapped to the same Parlay/OSA methods as the **sendSms** operation (clause 6.1.1 **sendSms**). The only difference is the mapping to the `info` and `variableInfo` parameters of the `IpUI.sendInfoAndCollectReq` method, as follows:

- The `info` parameter specifies the logo to send. The `InfoBinData` element is constructed from the **image** part of the **sendSmsLogoRequest** message.

- The `variableInfo` parameter could additionally include a `VariablePartInteger` element constructed from the `smsFormat` part of the `sendSmsLogoRequest` message.

6.1.3 sendSmsRingtone

The sequence diagram in clause 5.1 Send Short Message to One or More Addresses (figure 1) illustrates the flow for the `sendSms` operation. The flow for the `sendSmsRingtone` operation is identical.

The `sendSmsRingtone` operation is synchronous from the Parlay X client's point of view. It is mapped to the same Parlay/OSA methods as the `sendSms` operation (clause 6.1.1 `sendSms`). The only difference is the mapping to the `info` and `variableInfo` parameters of the `IpUI.sendInfoAndCollectReq` method, as follows:

- The `info` parameter specifies the ringtone to send. The `InfoData` element is constructed from the `ringtone` part of the `sendSmsRingtoneRequest` message. Alternatively the `InfoData` element is constructed from the `ringtone` and `smsFormat` parts of `sendSmsRingtoneRequest` in the form of a single concatenated string.
- The `variableInfo` parameter could additionally include a `VariablePartInteger` element constructed from the `smsFormat` part of the `sendSmsRingtoneRequest` message.

6.1.4 getSmsDeliveryStatus

The sequence diagram in clause 5.1 Send Short Message to One or More Addresses (figure 1) illustrates the flow for the `getSmsDeliveryStatus` operation.

The `getSmsDeliveryStatus` operation is synchronous from the Parlay X client's point of view. It is mapped from the following Parlay/OSA methods:

- `IpAppUI.sendInfoAndCollectRes`.
- `IpAppUI.sendInfoAndCollectErr`.
- `IpAppUIManager.reportEventNotification`.

The delivery status provided to the Parlay X client will depend on the timing of the `getSmsDeliveryStatus` operation invocation. If a message event notification is triggered in the network as a result of an earlier `sendSmsXxx`-related operation, then the delivery status information provided in the `IpAppUIManager.reportEventNotification` callback is mapped. If such a notification is not enabled, or it has not triggered, then the delivery status provided in the `IpAppUI.sendInfoAndCollectRes` callback is mapped.

6.1.4.1 Mapping from `IpAppUI.sendInfoAndCollectRes`

The `IpAppUI.sendInfoAndCollectRes` method is invoked with the following parameters:

Name	Type	Comment
userInteraction SessionID	TpSessionID	Not mapped. [The value provided in the result from <code>IpUIManager.createUI</code>].
assignmentID	TpAssignmentID	Not mapped. [The value provided in the result from <code>IpUI.sendInfoAndCollectReq</code>].
response	TpUIReport	The response parameter maps to the DeliveryStatus element of a DeliveryInformation parameter of the deliveryStatus part of a getSmsDeliveryStatusResponse message, as follows. <ul style="list-style-type: none"> • <code>P_UI_REPORT_UNDEFINED</code> maps to DeliveryUncertain • All other values (i.e. <code>P_UI_REPORT_INFO_SENT</code>; <code>P_UI_REPORT_INFO_COLLECTED</code>; <code>P_UI_REPORT_NO_INPUT</code>; <code>P_UI_REPORT_TIMEOUT</code>) map to DeliveredToNetwork.
collectedInfo	TpString	If the response parameter value is <code>P_UI_REPORT_INFO_COLLECTED</code> , then the <code>collectedInfo</code> parameter contains a network message identifier for the Short Message. This identifier is subsequently used for correlating with the value of the <code>eventNotificationInfo.UIEventData</code> element of the <code>IpAppUIManager.reportEventNotification</code> method: clause 6.1.4.3 Mapping from <code>IpAppUIManager.reportEventNotification</code> .

6.1.4.2 Mapping from `IpAppUI.sendInfoAndCollectErr`

The `IpAppUI.sendInfoAndCollectErr` method is invoked with the following parameters:

Name	Type	Comment
userInteractionSessionID	TpSessionID	Not mapped. [The value provided in the result from <code>IpUIManager.createUI</code>].
assignmentID	TpAssignmentID	Not mapped. [The value provided in the result from <code>IpUI.sendInfoAndCollectReq</code>].
error	TpUIError	Maps to the DeliveryImpossible value of the DeliveryStatus element of a DeliveryInformation parameter of the deliveryStatus part of a getSmsDeliveryStatusResponse message.

6.1.4.3 Mapping from `IpAppUIManager.reportEventNotification`

The `IpAppUIManager.reportEventNotification` method is invoked with the following parameters:

Name	Type	Comment
userInteraction	TpUIIdentifier	Not mapped. Specifies the reference to the User Interaction interface and the sessionID to which the notification relates.
eventNotificationInfo	TpUIEventNotificationInfo	The mapping to the deliveryStatus part is as follows: <ul style="list-style-type: none"> The OriginatingAddress element is not mapped. It identifies the Parlay X application, as described in clause 6.1.1.1 Mapping to <code>IpUIManager.createNotification</code>. The DestinationAddress element maps to the DeliveryInformation.address element. The ServiceCode element contains an operator-specific value reporting a terminal delivery related status event. It is (one of) the value(s) specified in the ServiceCode element of the eventCriteria parameter of the <code>IpUIManager.createNotification</code> method (clause 6.1.1.1 Mapping to <code>IpUIManager.createNotification</code>). This operator-specific value maps to one of the following values of the DeliveryInformation.deliveryStatus element:: <ul style="list-style-type: none"> DeliveryImpossible DeliveredToTerminal DeliveryUncertain The DataTypeInfo element is not mapped, but should have a value of <code>P_UI_EVENT_DATA_TYPE_TEXT</code>. The UIEventData element (a text string) provides the correlation with the UI interface objects used to send the message to the destination address. [It contains the message identifier returned to the web service in the collectedInfo parameter of the <code>IpAppUI.sendInfoAndCollectRes</code> method (clause 6.1.4.1 Mapping from <code>IpAppUI.sendInfoAndCollectRes</code>).]
assignmentID	TpAssignmentID	Not mapped. [The value provide in the result from <code>IpUIManager.createNotification</code>].

The result from `IpAppUIManager.reportEventNotification` is of type `IpAppUIRef` and is used internally to correlate with the User Interaction interface instance (i.e. of type `IpUI`) associated with the event notification. This callback reference result parameter may be set to a default value since there is no further interaction with this message delivery status-related UI instance: the `IpUI.release` method is invoked as shown in clause 5.1 Send Short Message to One or More Addresses (step 11).

6.1.5 notifySmsDeliveryReceipt

The sequence diagram in clause 5.1 Send Short Message to One or More Addresses (figure 1) illustrates the flow for the **notifySmsDeliveryReceipt** operation, which is mapped from the following Parlay/OSA methods:

- Parlay exceptions thrown by `IpUIManager.createUI`, as described in clause 6.1.1.2 Mapping to `IpUIManager.createUI`.

- Parlay exceptions thrown by `IpUI.sendInfoAndCollectReq`, as described in clause 6.1.1.3 Mapping to `IpUI.sendInfoAndCollectReq`.
- `IpAppUI.sendInfoAndCollectErr`.
- `IpAppUIManager.reportEventNotification`.

6.1.5.1 Mapping from `IpAppUI.sendInfoAndCollectErr`

The `IpAppUI.sendInfoAndCollectErr` method is invoked with the following parameters:

Name	Type	Comment
userInteraction SessionID	TpSessionID	Not mapped. [The value provide in the result from <code>IpUIManager.createUI</code>].
assignmentID	TpAssignmentID	Not mapped. [The value provide in the result from <code>IpUI.sendInfoAndCollectReq</code>].
error	TpUIError	Maps to the DeliveryImpossible value of the DeliveryStatus element of the DeliveryInformation parameter of the deliveryStatus part of a notifySmsDeliveryReceiptRequest message.

In addition, the **correlator** part of the **notifySmsDeliveryReceiptRequest** message is assigned the value of the **correlator** element of the **receiptRequest** part of the **sendSmsXxxRequest** message to which it relates.

6.1.5.2 Mapping from `IpAppUIManager.reportEventNotification`

The `IpAppUIManager.reportEventNotification` method is invoked with the following parameters:

The mapping of the parameters of the `IpAppUIManager.reportEventNotification` method to the **deliveryStatus** part of the **notifySmsDeliveryReceiptRequest** message is identical to the mapping to the **getSmsDeliveryStatusResponse** message, as described in clause 6.1.4.3 Mapping from `IpAppUIManager.reportEventNotification`.

In addition, the **correlator** part of the **notifySmsDeliveryReceiptRequest** message is assigned the value of the **correlator** element of the **receiptRequest** part of the **sendSmsXxxRequest** message to which it relates.

6.1.6 startSmsNotification

The sequence diagram in clause 5.2 Notification of Short Message Reception and Retrieval (figure 2) illustrates the flow for the **startSmsNotification** operation, which is mapped to the Parlay/OSA method:

`IpUIManager.createNotification`, provided there is no existing notification already established for the destination address contained in the **smsServiceActivationNumber** part.

6.1.6.1 Mapping to `IpUIManager.createNotification`

The `IpUIManager.createNotification` is invoked with the following parameters:

Name	Type	Comment
appUIManager	IpAppUIManagerRef	Not mapped. Reference to callback (internal).
eventCriteria	TpUIEventCriteria	Specifies the event notification criteria, consisting of 3 elements: <ul style="list-style-type: none"> • The <code>OriginatingAddress</code> is not mapped. It is set to be valid for all senders. • The <code>DestinationAddress</code> is constructed based on the URI provided in the smsServiceActivationNumber part of the startSmsNotificationRequest message, mapped as described in TR 102 397-1 [3]. • The <code>ServiceCode</code> element is not mapped.

The result from `IpUIManager.createNotification` is of type `TpAssignmentID` and is used internally to correlate the callbacks. Specifically it is correlated with the value of the **reference** part received from the application in the **startSmsNotificationRequest** message and the **correlator** part returned to the application in the **notifySmsReceptionRequest** message.

Note that the **reference** part and the optional **criteria** part of a **startSmsNotificationRequest** message are not mapped to `IpUIManager.createNotification`. Instead the web service uses all the text string criteria values associated with a specific destination address to parse any event reported for that address by the `IpAppUIManager.reportEventNotification` method. The web service determines whether the event is valid - i.e. there is a match with a text string criteria value. If valid, the web service stores the message and selects the previously provisioned application callback web service to receive the **notifySmsReceptionRequest** message. If invalid, the web service discards the event notification.

Parlay exceptions thrown by `IpUIManager.createNotification` are mapped to Parlay X exceptions as defined in clause 6.2 Exceptions.

6.1.7 notifySmsReception

The sequence diagram in clause 5.2 Notification of Short Message Reception and Retrieval (figure 2) illustrates the flow for the **notifySmsReception** operation, which is mapped from the Parlay/OSA method: `IpAppUIManager.reportEventNotification`.

6.1.7.1 Mapping from `IpAppUIManager.reportEventNotification`

The `IpAppUIManager.reportEventNotification` method is invoked with the following parameters:

Name	Type	Comment
<code>userInteraction</code>	<code>TpUIIdentifier</code>	Not mapped. Specifies the reference to the User Interaction interface and the <code>sessionId</code> to which the notification relates.
<code>eventNotificationInfo</code>	<code>TpUIEventNotificationInfo</code>	The mapping to the message part is as follows: <ul style="list-style-type: none"> the <code>OriginatingAddress</code> element maps to the senderAddress element of the SmsMessage parameter of the message part; the <code>DestinationAddress</code> element maps to the smsServiceActivationNumber element of the SmsMessage parameter of the message part; the <code>ServiceCode</code> element is not mapped; the <code>DataTypeInfo</code> element is not mapped, but should have a value of <code>P_UI_EVENT_DATA_TYPE_TEXT</code>; the <code>UIEventData</code> element (a text string) should contain, using a vendor/operator-specific convention, the text contained in the event-related Short Message, which maps to the message element of the SmsMessage parameter of the message part.
<code>assignmentID</code>	<code>TpAssignmentID</code>	Not mapped. [The value provide in the result from <code>IpUIManager.createNotification</code>].

Note that this mapping occurs if there is at least one active notification established for the value of the `eventNotificationInfo.DestinationAddress` element, an associated application callback web service, and one of the following conditions is satisfied:

- There is only one active notification that was defined without the optional text string criteria value.
- There is one active notification that was defined with the optional text string criteria value and that value matches the first word in the value of the `eventNotificationInfo.UIEventData` element.
 - Note that the "first word" in the message is defined as the initial characters after discarding any leading Whitespace and ending with a Whitespace or end of message. The matching shall be case-insensitive.

The result from `IpAppUIManager.reportEventNotification` is of type `IpAppUIRef` and is used internally to correlate with the User Interaction interface instance (i.e. of type `IpUI`) associated with the event notification.

6.1.8 getReceivedSms

The sequence diagram in clause 5.2 Notification of Short Message Reception and Retrieval (figure 2) illustrates the flow for the **getReceivedSms** operation. It is not explicitly mapped to any Parlay/OSA method. Instead, the **getReceivedSms** operation is a bulk retrieval capability for previously received short messages matching criteria defined in an off-line provisioning step. This retrieval operation includes matching messages previously and individually delivered to the application via the **notifySmsReception** operation.

6.1.9 stopSMSNotification

The sequence diagram in clause 5.2 Notification of Short Message Reception and Retrieval (figure 2) illustrates the flow for the **stopSmsNotification** operation, which is mapped to the Parlay/OSA method:

`IpUIManager.destroyNotification`, provided that the referenced notification is the last active notification for the associated destination address. Otherwise at least one other notification (i.e. associated with a different text string criteria value) remains active for this destination address and the mapping is not performed.

6.1.9.1 Mapping to `IpUIManager.destroyNotification`

The `IpUIManager.destroyNotification` is invoked with the following parameters:

Name	Type	Comment
assignmentID	AssignmentID	Not mapped. [The value provide in the result from <code>IpUIManager.createNotification</code> and correlated with the value of the reference part received from the application in the original startSmsNotificationRequest message and the value of the correlator part received from the application in the stopSmsNotificationRequest message].

Parlay exceptions thrown by `IpUIManager.destroyNotification` are mapped to Parlay X exceptions as defined in clause 6.2 Exceptions.

6.2 Exceptions

For this mapping document, the mapping of Parlay/OSA API method exceptions to Parlay X Web Service exceptions is common and defined in TR 102 397-1 [3]. There are no service-specific exception mappings.

7 Additional Notes

No additional notes are provided.

History

Document history		
V1.1.1	December 2005	Publication