Technical Specification Group Services and System Aspects
Meeting #24, Seoul, Korea 7-10 June 2004

TSGS#23(04)0315

Source: **TSG SA WG2**
Title: **CRs on 23.127 (OSA stage 2)**
Agenda Item: **7.2.3**

The following Change Requests (CRs) have been approved by TSG SA WG2 and are requested to be approved by TSG SA plenary #24.

S2 doc #	Title	Spec	CR #	cat	Version in	REL	WI	S2 meeting	Clauses affected
S2-042276	Add descriptions of OSA high-level abstraction interfaces	23.127	047r1	F	6.0.0	6	OSA3	S2 #40	9 (new)

3GPP TSG-SA WG2 Meeting #40 **Tdoc ⌘S2-042276**
Sophia Antipolis, France, 17th – 21st May 2004

CR-Form-v7

CHANGE REQUEST

⌘ **23.127** **CR** **047** ⌘**rev** **1** ⌘ Current version: **6.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Add descriptions of OSA high-level abstraction interfaces
Source:	⌘	SA2 (Ericsson, Lucent, Siemens, TeliaSonera)
Work item code:	⌘	OSA3
Date:	⌘	18/05/2004
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	Aligning the 3GPP Release 6 stage 2 OSA architecture specification with the OSA stage 1 requirements and the OSA stage 3 interfaces, fulfilling those requirements.
Summary of change:	⌘	There is an OSA stage 1 requirement for High-level abstracted interfaces, which is currently being implemented in OSA stage 3 TS 29.199 by a suite of Parlay X Web Service interfaces. These high-level Parlay X Web Services interfaces provide a high-level abstraction of some of the existing available OSA API interfaces. The stage 1 and stage 3 material is not yet reflected in the OSA stage 2 architecture document. This CR proposes the introduction of the appropriate descriptions of this functionality, in order to bring the stage 1, stage 2, and stage 3 to the same consistent level. These descriptions are included in a proposed new clause, clause 9, in TS 23.127.
Consequences if not approved:	⌘	The stage 1, stage2, and stage 3 Release 6 specifications for OSA are mis-aligned. The OSA stage 2 does not reflect the OSA stage 1 requirements, and the OSA stage 3 interfaces specification.

Clauses affected:	⌘	9 (new)

Other specs affected:	⌘	Y	N		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9 Parlay X Web Services: OSA at a higher level of abstraction

9.1 General

The general architecture of a solution including Web Services and/or OSA links in deployment allows a number of deployment configurations. These configurations are derivatives of a basic architecture model, enabling a variety of deployment options.

A typical Parlay X Web Services deployment model is shown in the Figure 9.1. This model shows the publication of Parlay X Web Services through a registry, making those Web Services available for discovery, and for applications to use Web Services access methods to interact with the Gateway, where the Web Service interfaces are implemented.

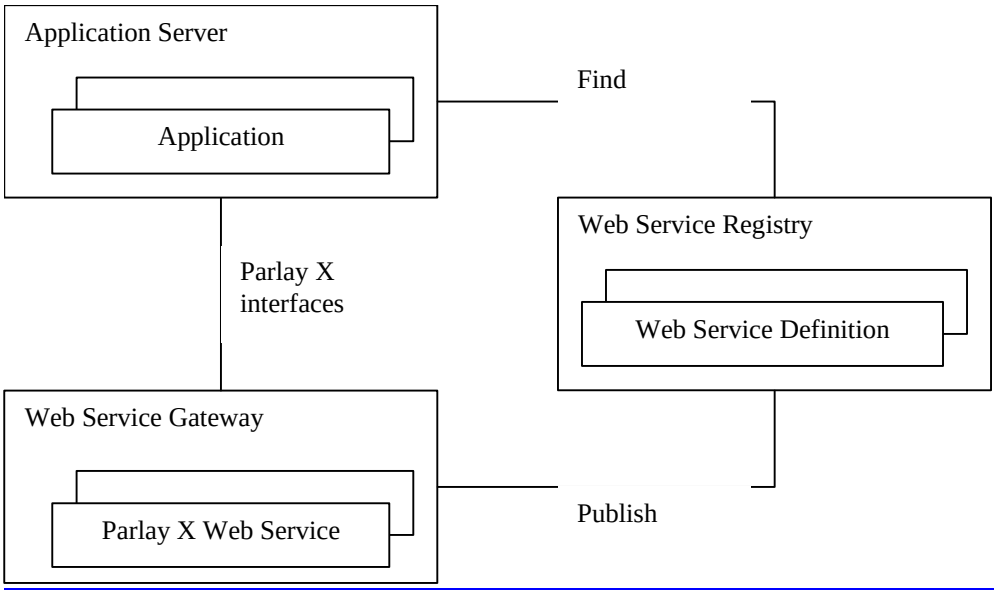

Figure 9.1 Parlay X Web Services deployment model

Interfaces to the Web Services Registry are drawn in Figure 9.1 for consistency with Web Service architectures, but they are not in the scope of the Parlay X Web Services.

This architecture may be combined with existing OSA deployment configurations, providing the overall architecture as illustrated in Figure 9.2.

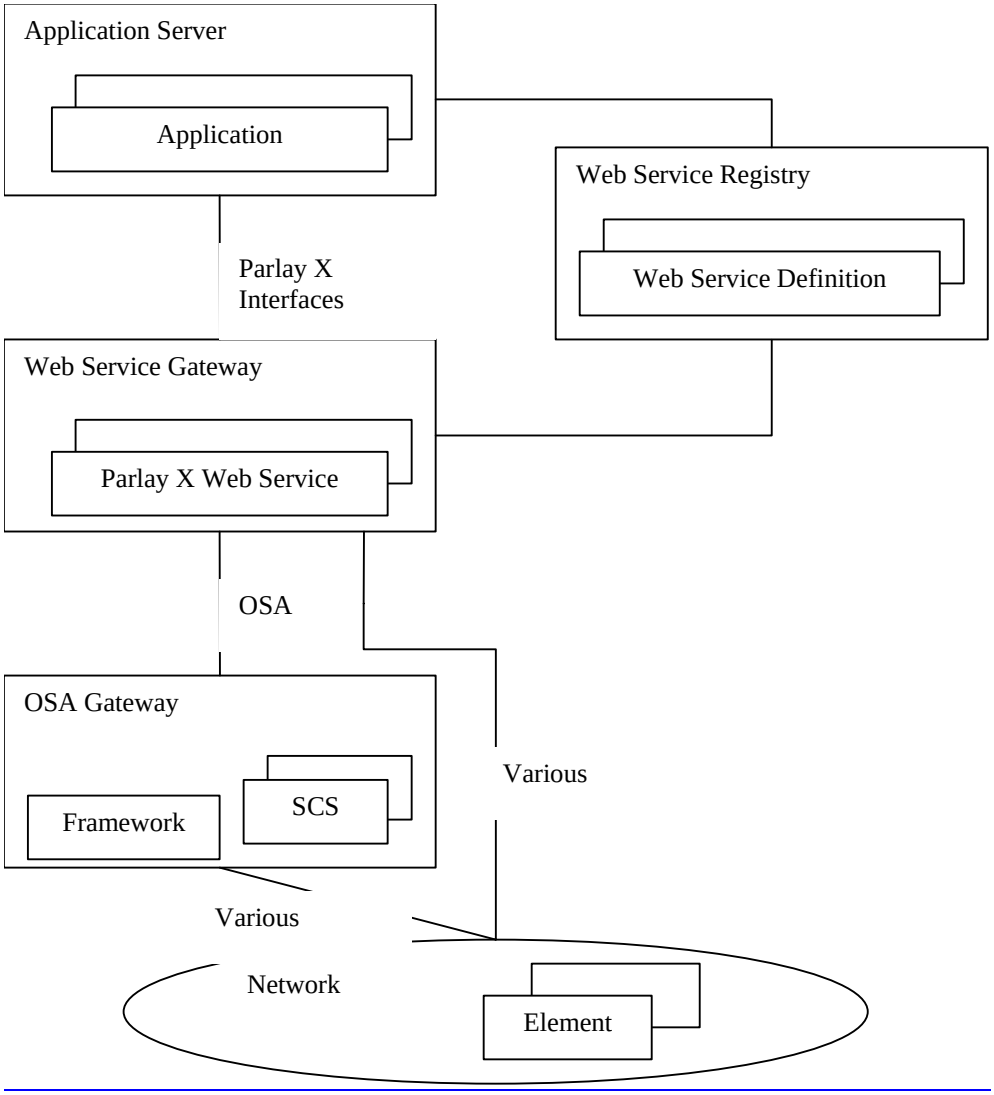

Figure 9.2 The overall Parlay X Web Services architecture

9.1.1 Deployment Scenario A: Web Services to OSA

This scenario addresses solutions that combine Web Services interfaces facing the exterior of the network with OSA interfaces facing the interior of the network.

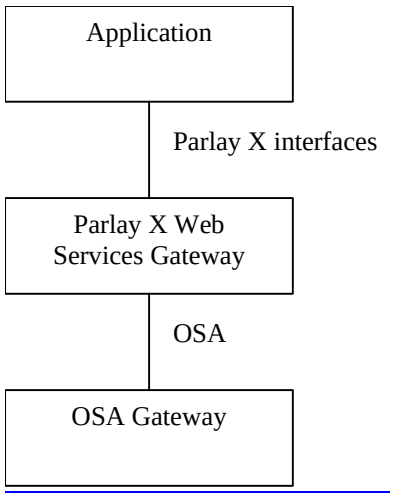

Figure 9.3 Deployment Scenario A: Web Services to OSA

Environment Description

The Application will utilize Web Services to discover and interact with the network, and will not have visibility to the OSA implementation behind the Parlay X Web Services Gateway. The Parlay X Web Services Gateway attaches to the OSA Gateway through an OSA interface. The information published to the Web Services Registry provides the Application with the connection information required to connect with the Parlay X Web Services Gateway.

9.1.2 Deployment Scenario B: Web Services to Network Element

This scenario addresses solutions that combine Web Services interfaces facing the exterior of the network with network element specific interfaces facing the interior of the network.

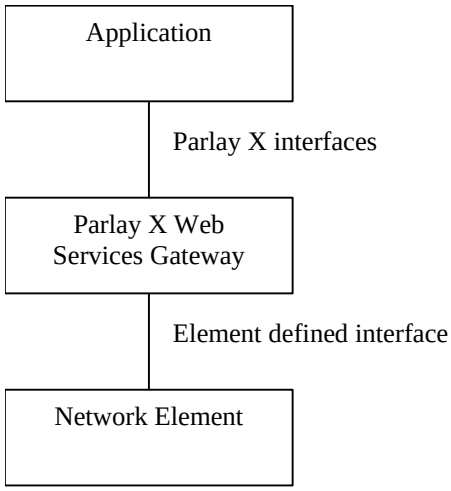

Figure 9.4 Deployment Scenario B: Web Services to Network Element

Environment Description

The Application will utilize Web Services to discover and interact with the network, and will not have visibility to the implementation behind the Parlay X Web Services Gateway. The Parlay X Web Services Gateway attaches to the Network Element through an interface defined by the Network E lement. These interfaces (i.e. Element defined interface) are not in the scope of this specificaiton. The information published to the Web Services Registry provides the Application with the connection information required to connect with the Parlay X Web Services Gateway.

The next sections describe the Web Services supported by OSA Rel6.

9.2 Third Party Call

This Web Service supports the functionality to create and manage a call initiated by an application (third party call). Using the Third Party Call Web Service, applications can invoke call handling functions without detailed telecommunication knowledge. The functionality provided is:

- Make a call which sets up a call between two addresses
- Get call information gives information about how the call progressed in the network
- End call will cease the call
- Cancel Call Request allows the network to prevent call setup before completion

9.3 Network-Initiated Third Party Call

These functions are 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. Using the Network-Initiated Third Party Call Web Service, application developers can perform simple handling of network-initiated calls without specific Telco knowledge. The Web services allow the application to handle the following conditions occurring in the set-up of a call:

- Destination busy
- Address is not Reachable
- Destination is not answering
- A specific number has been called by subscriber
- The subscriber has taken the terminal "off-hook"

9.4 SMS

The overall scope of this Web Service is to provide to applications the means to handle SMS in a simple way. For receiving a message from the network, the application may use either polling or notification mechanisms. The notification mechanism is more common: network-initiated messages are sent to autonomous application-side web services. Both mechanisms are supported, but the provisioning of the notification-related criteria is not specified. Services are specified to enable an application to:

- Send any SMS
- Send a logo embodied in an SMS
- Send a ringtone embodied in an SMS
- Retrieve the delivery status of an SMS
- Request to be notified of received SMSs
- Retrieve SMS messages sent to an address

9.5 Multimedia Message

This is additional to the SMS web services and handles more general messaging case. Multimedia Message services provide generic messaging features (including SMS) to send and receive messages. For receiving a message from the network the application may use either polling or notification mechanisms. Network-initiated messages are sent to autonomous application-side web services. The following functions are supported:

- Send a message to an address
- Retrieve the delivery status of a message
- Retrieve by polling for received messages
- Retrieve message parts by URI references
- Retrieve whole messages as SOAP attachments
- Notification to the application that a message has been received for a specific address

9.6 Payment

The Payment Web Services support payment reservation, pre-paid payments, and post-paid payments. They support charging of both volume and currency amounts, a conversion function, and a settlement function in case of a financially resolved dispute. The functions supported enable the application to:

- Charge/refund an account by a currency amount
- Charge/refund an account by volume (e.g. minutes)
- Calculate a currency amount from a volume for a specific account
- Reserve a currency amount on an account
- Charge a prior reservation to the account
- Release a reservation by returning to an account the amount remaining in a reservation
- Reserve a volume amount of an account

9.7 Account Management

The Parlay X Account Management supports account querying, direct recharging and recharging through vouchers. The application can manage various aspects of an account using the functionality to:

Return the currency balance on an account

- Request what date the credit on an account is due to expire
- Update the currency/account balance on an account
- Return the transaction history on an account

9.8 User Status

The Parlay X User Status Web Service is used for getting user status information. The functionality supported is simple:

- Requests a user's status subject to the user's policies.

9.9 Terminal Location

The Parlay X Terminal Location Web Service is used for getting location information, it does not require specific telecommunication skills, but a knowledge of location co-ordinates is required. One service is specified to:

- Request the location of one terminal subject to user's privacy policies.

End of Clause 9

New Clause 9