



Parlay/OSA in OSE Requirements

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1. Scope

(Informative)

This specification defines the use cases and requirements for ParlayinOSE (PIOSE). The requirements in this document addresses how OMA OSE and Parlay/OSA architectures could be integrated and components implementation/ realizations coexist. This PIOSE RD describes requirements on integration of OSA/Parlay, Parlay X Web Service and OSE.

The information contained in this RD is applicable to OMA working groups that are developing service enablers that may use other resources such as Parlay, Parlay X components. The RD focuses on determining the requirements for how the OSE could take advantage of Parlay/OSA components.

The requirements on specific OMA service enablers are not affected by this RD and are handled by the individual OMA working groups as usual. Parlay/OSA architecture[OSA] is not affected by this RD either.

2. References

2.1 Normative References

- [RFC2119] “Key words for use in RFCs to Indicate Requirement Levels”, S. Bradner, March 1997, URL:<http://www.ietf.org/rfc/rfc2119.txt>
- [OSE] OMA Service Environment, Open Mobile Alliance™, OMA-Service-Environment-V1_0_2-20050803-A, <http://www.openmobilealliance.org>
- [OMADICT] “Dictionary for OMA specifications”, Open Mobile Alliance™, OMA-Dictionary-V2_3-20051220-A, URL:<http://www.openmobilealliance.org/>
- [IMSinOMA] “Utilization of IMS capabilities”, Open Mobile Alliance™, OMA-AD-IMS-V1_0-20050809-A, URL:<http://www.openmobilealliance.org/>

2.2 Informative References

- [OSA] Open Service Access (OSA); Stage 2
3GPP TS 23.198 (Release 6)
URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/23_series/
- [ParlayX: Common] Open Service Access (OSA); Parlay X Web Services; Part 1: Common
ETSI ES 202 391-1 (Parlay X2)
URL: <http://www.parlay.org/en/specifications/index.asp>
or 3GPP Equivalent:
3GPP TS 29.199-1 (Release 6)
URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
- [ParlayX: Third Party Call] Open Service Access (OSA); Parlay X Web Services; Part 2: Third Party Call
ETSI ES 202 391-2 (Parlay X2)
URL: <http://www.parlay.org/en/specifications/index.asp>
or 3GPP Equivalent:
3GPP TS 29.199-2 (Release 6)
URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
- [ParlayX: Call Notification] Open Service Access (OSA); Parlay X Web Services; Part 3: Call Notification
ETSI ES 202 391-3 (Parlay X2)
URL: <http://www.parlay.org/en/specifications/index.asp>
or 3GPP Equivalent:
3GPP TS 29.199-3 (Release 6)
URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
- [ParlayX Short Messaging] Open Service Access (OSA); Parlay X Web Services; Part 4: Short Messaging,
ETSI ES 202 391-4 (Parlay X2)
URL: <http://www.parlay.org/en/specifications/index.asp>
or 3GPP Equivalent:
3GPP TS 29.199-4 (Release 6)
URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/ URL:
<http://www.parlay.org/en/specifications/index.asp>
- [ParlayX: Multimedia Messaging] Open Service Access (OSA); Parlay X Web Services; Part 5: Multimedia Messaging
ETSI ES 202 391-5 (Parlay X2)
URL: <http://www.parlay.org/en/specifications/index.asp>
or 3GPP Equivalent:
3GPP TS 29.199-5 (Release 6)
URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/ URL:
<http://www.parlay.org/en/specifications/index.asp>
- [ParlayX: Payment] Open Service Access (OSA); Parlay X Web Services; Part 6: Payment
ETSI ES 202 391-6 (Parlay X2)
URL: <http://www.parlay.org/en/specifications/index.asp>
or 3GPP Equivalent:
3GPP TS 29.199-6 (Release 6)

[ParlayX: Account Management]	<p>URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/URL: http://www.parlay.org/en/specifications/index.asp Open Service Access (OSA); Parlay X Web Services; Part 7: Account Management ETSI ES 202 391-7 (Parlay X2)</p>
[ParlayX: Terminal Status]	<p>URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.199-7 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/ http://www.parlay.org/en/specifications/index.asp Open Service Access (OSA); Parlay X Web Services; Part 8: Terminal Status ETSI ES 202 391-8 (Parlay X2)</p>
[ParlayX: Terminal Location]	<p>URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.199-8 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/URL: http://www.parlay.org/en/specifications/index.asp Open Service Access (OSA); Parlay X Web Services; Part 9: Terminal Location ETSI ES 202 391-9 (Parlay X2)</p>
[ParlayX: Call Handling]	<p>URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.199-9 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/URL: http://www.parlay.org/en/specifications/index.asp Open Service Access (OSA); Parlay X Web Services; Part 10: Call Handling ETSI ES 202 391-10 (Parlay X2)</p>
[ParlayX: Audio Call]	<p>URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.199-10 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/ http://www.parlay.org/en/specifications/index.asp Open Service Access (OSA); Parlay X2 Web Services; Part 11: Audio Call ETSI ES 202 391-4 (Parlay X2)</p>
[ParlayX: Multimedia Conference]	<p>URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.199-11 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/URL: http://www.parlay.org/en/specifications/index.asp Open Service Access (OSA); Parlay X Web Services; Part 12: Multimedia Conference ETSI ES 202 391-12 (Parlay X2)</p>
[ParlayX: Address List Management]	<p>URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.199-12 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/URL: http://www.parlay.org/en/specifications/index.asp Open Service Access (OSA); Parlay X Web Services; Part 13: Address List Management ETSI ES 202 391-13 (Parlay X2)</p>
[ParlayX: Presence]	<p>URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.199-13 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/URL: http://www.parlay.org/en/specifications/index.asp Open Service Access (OSA); Parlay X Web Services; Part 14: Presence ETSI ES 202 391-14 (Parlay X2)</p>
	<p>URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.199-14 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/URL: http://www.parlay.org/en/specifications/index.asp</p>

[Parlay: Overview]	Open Service Access (OSA); Application Programming Interface;Part 1: Overview ETSI ES 203 915-1 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-1 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: Common Data]	Open Service Access (OSA); Application Programming Interface;Part 2: Common Data Definitions ETSI ES 203 915-2 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-2 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: Framework]	Open Service Access (OSA); Application Programming Interface;Part 3: Framework ETSI ES 203 915-3 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-3 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: Call Control]	Open Service Access (OSA); Application Programming Interface;Part 4: Call Control ETSI ES 203 915-4-x (x= subpart 1,2,3, and 4) (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-4-x (x= subpart 1,2, and 3) (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: User Interaction]	Open Service Access (OSA); Application Programming Interface;Part 5: User Interaction ETSI ES 203 915-5 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-5 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: Mobility]	Open Service Access (OSA); Application Programming Interface;Part 6: Mobility ETSI ES 203 915-6 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-6 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: Terminal Capabilities]	Open Service Access (OSA); Application Programming Interface;Part 7: Terminal Capabilities ETSI ES 203 915-7 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-7 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: Data Session]	Open Service Access (OSA); Application Programming Interface;Part 8: Data Session Control ETSI ES 203 915-8 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-8 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: Generic Messaging]	Open Service Access (OSA); Application Programming Interface;Part 9: Generic Messaging ETSI ES 203 915-9 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp No 3GPP Equivalent: -
[Parlay: Connectivity]	Open Service Access (OSA); Application Programming Interface;Part 10: Connectivity Manager ETSI ES 203 915-10 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp No 3GPP Equivalent: -
[Parlay: Account Management]	Open Service Access (OSA); Application Programming Interface;Part 11: Account Management ETSI ES 203 915-11 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-11 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: Charging]	Open Service Access (OSA); Application Programming Interface;Part 12: Charging ETSI ES 203 915-12 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-12 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: Policy Management]	Open Service Access (OSA); Application Programming Interface;Part 13: Policy Management ETSI ES 203 915-13 (Parlay 5) URL: http://www.parlay.org/en/specifications/index.asp or 3GPP Equivalent: 3GPP TS 29.198-13 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
[Parlay: Presence and Availability]	Open Service Access (OSA); Application Programming Interface;Part 14: Presence and Availability

**[Parlay: Multi_Media
Messaging]**

ETSI ES 203 915-14 (Parlay 5) URL: <http://www.parlay.org/en/specifications/index.asp>
or 3GPP Equivalent:

3GPP TS 29.198-14 (Release 6) URL: [http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/
Open Service Access \(OSA\); Application Programming Interface;Part 15: Multi-Media
Messaging](http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/Open%20Service%20Access%20(OSA);%20Application%20Programming%20Interface;Part%2015:%20Multi-Media%20Messaging)

ETSI ES 203 915-15 (Parlay 5) URL: <http://www.parlay.org/en/specifications/index.asp>
or 3GPP Equivalent:

3GPP TS 29.198-15 (Release 6) URL: http://www.3gpp.org/ftp/Specs/latest/Rel-6/29_series/

3. Terminology and Conventions

3.1 Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

All sections and appendixes, except “Scope” and “Introduction”, are normative, unless they are explicitly indicated to be informative.

3.2 Definitions

Application	See description in [OMADICT].
Enabler	See description in [OMADICT].
Gateway (or Parlay Gateway)	synonym for Service Capability Server [Parlay: Overview] NOTE: From the viewpoint of applications, a Service Capability Server can be seen as a gateway to resources. [Parlay: Overview]
OSA AS	An entity that provides the service logic execution environment for client applications using the OSA API as specified in 3GPP TS 29.198. Its an AS that utilizes and exposes for service creation purpose the OSA/Parlay/Parlay X interfaces.
OSA Interface	standardized Interface used by application to access service capability features. [Parlay: Overview]
Service	See description in. [OMADICT].
Service Capability Feature (SCF):	functionality offered by service capabilities that are accessible via the standardized OSA interface [Parlay: Overview]
Service Capability Server (SCS)	Functional Entity providing OSA interfaces towards an application [Parlay: Overview]

3.3 Abbreviations

3GPP	3rd Generation Partnership Project
3GPP2	3rd Generation Partnership Project 2
API	Application Programming Interface
AS	Application Server
OMA	Open Mobile Alliance
OSA	Open Service Access
OSE	OMA Service Environment
Parlay GW	Parlay Gateway (OSA SCS)
PE	Policy Enforcer
PX	ParlayX
SCF	Service Capability Feature
SCS	Service Capability Server

4. Introduction (Informative)

Parlay is a mature, tested architecture [OSA] with significant commercial adoption in the marketplace. It has integrated telecom network capabilities with IT applications via a secure, measured, and billable interface. There have been a significant number of products, operator trials, developments and contracts announced to be Parlay/OSA compliant. The Parlay/OSA architecture (which includes Parlay/OSA APIs and Parlay X Web Services specifications) are published by Parlay Group / ETSI / 3GPP as specifications,

OMA OSE specifies the environment in which OMA enablers are used to create, deploy, and maintain services. It is a conceptual environment that provides interfaces to applications that make use of these enablers (interfaces I0 or I0+P), interfaces to Service Providers' Execution Environment (I1) and the interfaces to invoke and use underlying capabilities and resources for enabler implementations (I2). OMA and Parlay Group (as well as ETSI / 3GPP / 3GPP2) are working to share their achievements and utmostly avoid overlaps of work, especially to avoid producing multiple diverging standards. There are different situations for the integrated implementations of OSE enablers and Parlay/OSA components, e.g:

- When Parlay/OSA (Framework and Service Capability Features (SCFs)) can coexist and be used with OMA enablers within the OSE
- When Parlay X Web Services interfaces can coexist and be used with OMA enablers within the OSE

By specifying the respective role and responsibilities of OSE components like Policy Enforcer, OMA enabler implementations and Parlay/OSA components like the Parlay/OSA Framework, Policy SCF and other SCFs, and Parlay X Web Services, the requirements provided in this RD aim to ensure suitable integration between OMA OSE and Parlay/OSA components. Among these benefits are:

- Take advantage of Parlay/Parlay X components on the basic OSE infrastructure to protect the investments of operators.
- Increase the flexibility for the vendors/operators to choose to develop/deploy the architecture of their products
- Exposes to 3rd parties, interfaces to functions whether they are OMA enablers or Parlay/OSA components, give more choices for the 3rd party to develop their applications and cooperate with operators' resources.
- Enable reuse between OMA enablers and Parlay/OSA APIs and Parlay X Web Services and avoiding duplication of specifications.

5. Use Cases (Informative)

5.1 Integrating Parlay APIs, Parlay X, Parlay GW and SCFs

5.1.1 Short Description

A service provider has deployed Parlay compliant resources (SCFs) along with a Parlay/OSA gateway and Framework[**Parlay: Framework**]. The service provider wants to expose similar SCFs through OMA enablers. It also needs to develop applications in the OSE that combine OMA and Parlay capabilities.

5.1.2 Actors

A service provider who has deployed:

- Parlay services (SCFs and/or PX WS)
- Parlay GW
- OMA enabler within an OSE realization (execution environment with PE).

5.1.2.1 Actor Specific Issues

- How to expose Parlay capabilities in OSE
- How to implement OMA enablers relying on Parlay capabilities
- How to implement applications in the OSE that exploit Parlay capabilities and OMA enablers
- How to consistently integrate policy enforcement performed by Parlay GW and framework with OSE PE.

5.1.2.2 Actor Specific Benefits

The service provider can implement OMA enabler reusing its Parlay infrastructure. The service provider can develop and deploy rich applications and services that combine and integrate Parlay and OMA capabilities.

5.1.3 Pre-conditions

The service provider has deployed a Parlay GW and Parlay SCFs. The service provider has deployed an OSE realization.

5.1.4 Post-conditions

Parlay capabilities are exposed in the OSE. OMA enablers with similar capabilities can be implemented using the Parlay capabilities. The capability exposed by the OMA enabler and the Parlay SCF are similar or directly related (e.g. Presence/User Status, Mobility within Parlay SCF and Parlay X Web Services, and OMA Location). Services in the OSE can combine OMA and Parlay capabilities. These can be exposed to third party with appropriate policy enforcement.

5.1.5 Normal Flow

- An application is developed by the service provider (or other developers) by calling OMA enablers (I0+P).
- Policy enforcement is applied.
- Some OMA enablers are implemented by using Parlay SCFs. The implementation makes required calls to Parlay resources and receives required notifications.

5.1.6 Alternative Flow

1. Some Parlay capabilities today have no OMA enabler equivalent (e.g. call control). The application includes making requests for such capabilities to Parlay resources in addition to requests to OMA enablers.
2. Capabilities may be exposed to third parties.
3. Applications may be developed in third party domain.
4. Capabilities may be exposed through OMA enabler I0 and Parlay X or Parlay APIs.

5.1.7 Operational and Quality of Experience Requirements

It will be possible to integrate Parlay and OSE in ways that facilitate reuse of the Parlay infrastructure to develop OMA enablers or applications in the OSE.

The ParlayinOSE enabler must address Parlay APIs as well as Parlay X API's.

The ParlayinOSE enabler must discuss how OSE and Parlay GW, SCFs relate.

5.2 Determine the exact implementation (OMA enabler or Parlay SCF/Parlay X product)

5.2.1 Short Description

Consider the case where Parlay SCF/Parlay X resources are part of OSE and two components offer the same logic function, but have different interfaces. The interface of Parlay SCF/Parlay X component conforms to some TS in the 3GPP TS 29.198 or 3GPP TS 29.199 series (henceforward, we will use the term Parlay/OSA to describe some TS in the 3GPP TS 29.198 or 3GPP TS 29.199 series) and one component compliant to OSE. The appropriate implementation needs to be determined.

5.2.2 Actors

- Value Added Service Provider:
the value added service provider uses an I0+P type of interface offered by the Service Provider. Assume that the value added service provider needs terminal location information from selected terminals, carried by employees, in order to support an efficient Pizza delivery operation.
- Service Provider:
this service provider offers an I0+P type of interface that is implemented by OSE component or Parlay/OSA component. The I0+P type of interface usage could be agnostic of the OSE component fulfilling a request.

5.2.3 Pre-conditions

The service provider has deployed an OSE realization. It also deploys Parlay/OSA components in this environment. Some Parlay/OSA components perform the same logical function as OSE components. Both types of components are deployed in this OSE deployment.

5.2.4 Post-conditions

The component instance to be used is selected and it is used by the application.

5.2.5 Normal Flow

- An application developed by the operator/service provider/other developers sends a [Parlay/OSA or Parlay X](#) service request.

- There are at least two implementations (OMA enabler and Parlay/OSA component) that can process this service request. In case the application doesn't know which particular component to address, a mechanism determines which one is going to be used for this service request.
- The service request is passed on to the selected OSE or Parlay/OSA component.

5.2.6 Alternative Flow

The information indicating the component that needs to service the request has been included in the service request. In this situation, the request is serviced directly by the appropriate component.

5.2.7 Operational and Quality of Experience Requirements

- The Service Provider has the freedom to select the type of the component he wishes to use to realize the service of the VASP
- If offered by the SP, The Value Added Service Provider has the freedom to select the type of the component which he wishes to use.
- In the situation that the requestor doesn't address the specific OSE or Parlay/OSA component, the performance of the service request shouldn't be interfered due to the selection mechanism.
- The performance must not be degraded when integrating Parlay and OSE.

5.3 Consistent ParlayinOSE and IMSinOMA Use Case

5.3.1 Short Description

A service provider (A) is deploying IMS and OMA enablers following IMSinOMA.

The service provider has also deployed an OSA AS (an Application Server that utilizes and exposes for service creation purpose the OSA/Parlay/Parlay X interfaces as implemented by the SCSes or other resources) to expose its assets to a third party service provider (B)

5.3.2 Actors

A service provider who has deployed:

- IMS
- OSE and OMA enablers following IMSinOMA
- Parlay SCFs
- Parlay X
- OSA SCS and OSA AS

Third party service provider B who develops applications:

- Provides applications to subscribers on service provider A's network using A's resources
- Or uses resources from service provider A's network to build applications

5.3.2.1 Actor Specific Issues

Service provider and third party service provider:

- How to develop applications that rely on / combine features provided through OSE / OMA enabler or through OSA SCS and OSA AS? In other words, how to build applications that can make use IMS and OSA functions (i.e. avoiding silos)?
- How to ensure a consistent way to comply with SP specific policies to use its resources?

Service provider:

- How to consistently expose resources via the OSE and via OSA SCS and OSA AS (e.g. with similar policies, SLAs, ...):
 - Similar way to satisfy policies, subscribe to applications, etc...

5.3.2.2 Actor Specific Benefits

The third party service provider can implement applications using resources exposed via Parlay SCS (in OSA AS) and via OMA enablers in OMA (IMSInOMA). The third party service provider follows consistent steps (e.g. sign subscription, SLA selection, ways to satisfy service provider's policies, ...) to use resources independently of how they are exposed / implemented.

5.3.3 Pre-conditions

The service provider A has deployed an IMS network, OMA enablers according to IMSInOMA and OSA SCS and OSA AS.

5.3.4 Post-conditions

Applications are running in service provider A domain or in third party service provider B domain combining OMA enabler deployed according to IMSInOMA and features exposed through OSA SCS. The steps to subscribe to use these resources, and steps to satisfy the provider policies, are independent of the technologies used to expose the resources.

5.3.5 Normal Flow

- Subscriptions to OMA enablers in IMSInOMA and to features exposed by OSA SCS and OSA AS are done similarly (same steps).
- Policies that control access to the resources are satisfied. The policies can be technology agnostic.
- Such applications can mix and match features exposed via IMSInOMA (OMA enablers) and OSA SCS and OSA AS.

5.3.6 Alternative Flow

None identified as interesting.

5.3.7 Operational and Quality of Experience Requirements

Enablers and services that conform to IMSInOMA and OSA SCS can coexist in a common environment.

OMA enablers realized on an IMS network and features exposed via OSA SCS can be similarly used, combined, protected by consistent policies.

5.4 Parlay interfaces without Parlay infrastructure

5.4.1 Short Description

A service provider has deployed enablers using Parlay, following the PIOSE specification to deploy Parlay consistently with OSE. In order to address convergence (i.e. dealing with wired, mobile and broadband networks), the service provider plans to deploy / conform to the OSE (e.g. to capitalize on network/bearer independence).

The service provider has decided not to deploy Parlay SCFs / Gateways on some of its access networks (e.g. on its internet or wired networks)¹, at least for now.

The service provider would still like to be able to provide the same applications on the different access networks. The provider relies on the OSE to achieve this goal.

5.4.2 Actors

A service provider with multiple network access with applications built on Parlay for some network access and some network access without parlay infrastructure but OSE deployed for these networks.

5.4.2.1 Actor Specific Issues

How to ensure with OSE that applications built using Parlay features can be deployed over access network that do not deploy Parlay infrastructure?

5.4.2.2 Actor Specific Benefits

A same application can be run over different access network, some with Parlay infrastructure and some without.

5.4.3 Pre-conditions

The service provider has deployed applications over Parlay, following recommendations for Parlay in OSE. It has other access networks where it has deployed OSE but not Parlay infrastructure

5.4.4 Post-conditions

The same application is available on all access networks.

5.4.5 Normal Flow

An application using parlay interface is deployed on OSE using enablers that expose an interfaces I0 independent of the underlying network. The enablers are sometimes realized on Parlay Gateways and SCS and sometimes not.

5.4.6 Alternative Flow

The application is ported to different enablers that expose same capabilities but with different interfaces.

5.4.7 Operational and Quality of Experience Requirements

- OMA enablers can expose Parlay interfaces without requiring to be implemented on Parlay SCS/GW.
- Policies, application context / BSS data, third party attributes and subscribe attributes can be shared, managed or consolidated across technology choices (i.e. with Parlay infrastructure, with IMSinOMA)

¹ This does not imply in any way that such a deployment of OSA/Parlay on such network would be inadequate. It is solely an example of possible situation.

6. Requirements (Normative)

6.1 High-Level Functional Requirements

This section contains the high level requirements for the integration of Parlay/OSA and OSE [OSE]..

Label	Description	Enabler Release
ParlayinOSE-FUNC-001	The ParlayinOSE enabler MUST define how an OMA enabler implementation can use Parlay specifications, when the OMA enabler and Parlay specifications have similar capabilities.	PIOSE V1.0
ParlayinOSE-FUNC-002	The ParlayinOSE enabler MUST specify how applications can invoke both OMA enablers and Parlay specifications (using OSA and/or Parlay X defined interfaces).	PIOSE V1.0
ParlayinOSE-FUNC-003	The ParlayinOSE enabler MUST specify how the role of OSE policy enforce is achieved when both OMA enablers and Parlay capabilities and infrastructure are involved	PIOSE V1.0
ParlayinOSE-FUNC-004	The ParlayinOSE enabler MUST specify how to realize the OSE within a service provider domain who has deployed Parlay specifications, including outlining the role of Parlay Framework and SCFs.	PIOSE V1.0
ParlayinOSE-FUNC-005	The ParlayinOSE enabler MUST specify how Parlay APIs (including Parlay X) and capabilities can be used in OSE.	PIOSE V1.0
ParlayinOSE-FUNC-006	The ParlayinOSE enabler MUST specify how to relate Parlay APIs and capabilities with OMA enablers that provide similar functions (e.g Presence, messaging, ...)	PIOSE V1.0
ParlayinOSE-FUNC-007	The ParlayinOSE enabler MUST specify how to relate Parlay X and OMA enablers that provide similar functions.	PIOSE V1.0
ParlayinOSE-FUNC-008	The ParlayinOSE enabler MUST specify how to select between logically equivalent OSE and Parlay/OSA components in case the requestor doesn't indicate the type of component that is expected to service the request	PIOSE V1.0
ParlayinOSE-FUNC-009	The ParlayinOSE enabler MUST specify how Parlay specifications relates and should be used consistently with the IMSinOMA enabler with the OSE.	PIOSE V1.0
ParlayinOSE-FUNC-010	The ParlayinOSE enabler MUST specify how OSE and Parlay policy features relate and can be consistently used when Parlay is used with OSE.	PIOSE V1.0

Table 1: High-Level Functional Requirements

6.1.1 Security

Label	Description	Enabler Release
ParlayinOSE-SEC-1	The ParlayinOSE enabler MUST specify how OSE and Parlay security specifications relate to each other.	PIOSE V1.0
ParlayinOSE-SEC-2	The ParlayinOSE enabler MUST not weaken OSE or Parlay security capabilities when Parlay is used with OSE.	PIOSE V1.0
ParlayinOSE-SEC-3	The ParlayinOSE enabler MUST specify how security capabilities supported by Parlay and specified Parlay policy management relate to OSE.	PIOSE V1.0

ParlayinOSE-SEC-4	The ParlayinOSE enabler MUST enable consistent policy evaluation and enforcement between Parlay specifications and OSE when Parlay specifications is used within OSE.	PIOSE V1.0
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Note: Requirement ParlayinOSE-SEC-2 is not meant to imply a comparison between the OSE security model and the Parlay security model.

Table 2: High-Level Functional Requirements – Security Items

6.1.2 Charging

Label	Description	Enabler Release
ParlayinOSE-CHRG-1	The ParlayinOSE enabler MUST specify how OMA charging enabler and Parlay charging (e.g. the charging features within SCFs and PX Web Services in addition to the discrete Charging APIs) relate	PIOSE V1.0

Table 3: High-Level Functional Requirements – Charging Items

6.1.3 Administration and Configuration

Label	Description	Enabler Release
ParlayinOSE-ADMIN-1	The ParlayinOSE enabler MUST specify how Parlay provisioning could relate to the OSE and be used for provisioning: <ul style="list-style-type: none"> • Users • Applications • Third party 	PIOSE V1.0
ParlayinOSE-ADMIN-2	The ParlayinOSE enabler MUST specify how SLAs as defined in Parlay could fit within OSE.	PIOSE V1.0

Table 4: High-Level Functional Requirements – Administration and Configuration Items

6.1.4 Usability

Label	Description	Enabler Release
ParlayinOSE-USAB-1	The ParlayinOSE enabler MUST specify how and under which conditions the fact that Parlay is used (or not used) in the OSE does not (or does) affect the user experience	PIOSE V1.0
ParlayinOSE-USAB-2	The ParlayinOSE enabler MUST specify how and under which conditions the fact that Parlay is used (or not used) in the OSE does not (or does) impact enabler usage and exposure to third party.	PIOSE V1.0
ParlayinOSE-USAB-3	The ParlayinOSE enabler MUST allow a way for applications in the OSE to interact with enablers that may be implemented using Parlay	PIOSE V1.0

Table 5: High-Level Functional Requirements – Usability Items

6.1.5 Interoperability

Label	Description	Enabler Release
ParlayinOSE-INTOP-001	The ParlayinOSE enabler MUST NOT prevent the interoperability and/or interworking with other enablers (aka non-OSE or non-Parlay realized) and/or frameworks or infrastructure.	PIOSE V1.0

Table 6: High-Level Functional Requirements – Interoperability Items

6.1.6 Privacy

Label	Description	Enabler Release
ParlayinOSE-Priv-001	The ParlayinOSE enabler MUST specify how privacy controls, preferences and settings relate between Parlay and OSE.	PIOSE V1.0

Table 7: High-Level Functional Requirements – Privacy Items

6.2 Overall System Requirements

Label	Description	Enabler Release
ParlayinOSE-Overall-001	The ParlayinOSE enabler MUST NOT prevent sharing applications' and principal's data , regardless whether an enabler is realized using Parlay or not.	PIOSE V1.0

Table 8: High-Level System Requirements

Appendix A. Change History

(Informative)

A.1 Approved Version History

Reference	Date	Description
n/a	n/a	No prior version –or- No previous version within OMA

A.2 Draft/Candidate Version 1.0 History

Document Identifier	Date	Sections	Description
Draft Version OMA-RD-ParlayinOSE-V1_0	27 Nov 2005	1, 4, 5.1, 6.1	Baseline document. Incorporation of OMA-ARC-2005-0335R01- Initial_ParlayinOSE_Use_Cases_and_Reqs
	22 Dec. 2005	5.2 6.1	Incorporation of OMA-ARC-2005-0403R03-ParlayinOSE-Use-Cases
	9 Feb. 2006	6.1	Incorporation of OMA-ARC-2006-0041R01- Continuing_ARC_2005_0335, OMA-ARC-2006-0029-PIOSE-RD-Definitions
	31 May 2006	1, 2.1, 3.2, 4, 5.3, 5.4, 6.1, 6.2	Incorporation of OMA-ARC-2006-0166-Corrections-ParlayinOSE, OMA-ARC-2006-0157R01-Additional_ParlayinOSE_requirements
	14 May 2006	3.2, 3.3, 4, 5, and 6	Incorporation of OMA-ARC-2005-Response-PIOSE-LS and remarks from informal review with REQ
	11 Jul, 2006	2 and 6.1	Incorporation of OMA-ARC-2006-0230R01-OSE-reference-changes
	25 Sep 2006	All	Incorporation of OMA-ARC-2006-0298- INP_OMA_RDRR_PIOSE_V1_0_20060711_D Fixes to the versioning (V1.0) and History boxes
Candidate Version OMA-RD-ParlayinOSE-V1_0	15 Jun 2007	All	Status changed to Candidate by TP TP Ref# OMA-TP-2007-0207R01- INP_PIOSE_V1_0_RD_for_Candidate_Approval