



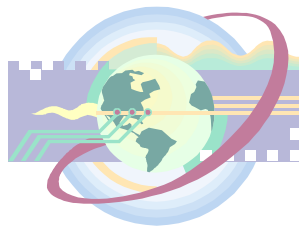
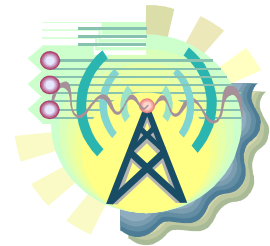
## Open API Solutions

### OSA/Parlay Framework

#### *What benefits does a Framework offer?*

##### **Access and Authentication**

The Framework controls access to the services within the Gateway, restricting use of the services to those applications subscribed to use that service, and who have passed all necessary security checks. The Framework provides a single point of access for parties interested in services being offered by the Gateway. Various encryption and digital signature algorithms are offered by the Framework to authenticate applications, service suppliers, enterprise operators and services wishing to access the facilities of the Framework.



##### **Registration**

The Framework offers service suppliers the ability to register new services with the Framework during run-time, and to announce, unannounced and unregistered their services. Registering allows services to offer their capabilities to any authenticated application, through the Framework's discovery mechanism.

##### **Discovery**

The Framework's service discovery mechanism is offered to service suppliers and applications, allowing the client to specify a service type and a set of desired properties, which a service they are interested in should have. For applications, this means that they can discover the services available to them in the gateway and select the one most suitable to their requirements. For service suppliers, this means that they can discover which services are already registered with the gateway.

##### **Integrity Management**

The Framework also offers various integrity management interfaces which both applications and services can make use of. These include load and fault management interfaces and also a heartbeat mechanism, which allows the framework and/or the application to send heartbeats to each other to prove that they are still healthy. The mechanism also exists between the framework and services, allowing the framework and/or the services to check on the health of the other entity. An example of the use of the heartbeat mechanism is that the framework could request a service to provide its heartbeat at a specified interval. If this is not received, the framework can, via the fault management interfaces inform the application that the service can no longer be used.

##### **Event Notification**

The Framework offers an event notification service. This allows an application or service supplier to request to be informed when a service of the specified service type is made available/unavailable, thus enabling an up-to-date view of the services offered via the Framework.

##### **Service Subscription**

Parlay adds the enterprise operator interfaces, not present in 3GPP OSA Release

4, which allow an enterprise operator to subscribe to services on behalf of the applications they manage. These interfaces allow an Enterprise to create/modify/delete each individual application's account with the framework, to create/modify/delete service contracts and profiles, and to group applications together into a Subscription Assignment Group, or SAG, which is assigned to a service profile, thus giving every member of the group the same access privileges to the service or service type specified in the profile. The interfaces also allow an Enterprise Operator to specify the level of service to be provided to each application.

## ***What are the benefits of a separate OSA/Parlay Framework?***

### **Who needs a Framework?**

The Framework is the glue that binds the various components of OSA/Parlay together, allowing the business model to perform to maximum advantage. The Framework is not used only by Gateway suppliers, but by representatives of every role in the Parlay subscription business model, i.e. service suppliers, Framework operators, enterprise operators and client applications. A separate, vendor-independent, Framework can be the core building block of a truly vendor-independent OSA/Parlay Gateway.

The inclusion of a Framework is essential to realise the concept of an OSA/Parlay Gateway. This Gateway does not have to be provided by the service suppliers as a complete "all-in-one" solution. A network operator, or any other party, can source a Framework from a Framework provider, and various services from service suppliers, and therefore produce a vendor-independent Gateway, tailored to their own individual business and network needs.

### **Service Suppliers**

Service Suppliers will require a Framework when testing their services, as ALL services have interactions of some kind with the

framework. Service Suppliers have to be able to register their services with a Framework and, if their service implements any of the OSA/Parlay Fault/Load Management and Heartbeat interfaces, then these must be thoroughly tested. A Framework running directly on the service developer's desktop, and under their control, will greatly facilitate these testing needs.

## ***How can Open API Solutions help?***

Open API Solutions can help you to understand what OSA/Parlay offers you and how it can be used to your advantage, enabling you to realise the increased revenue stream the Parlay business model provides.

The Open API Solutions OSA/Parlay Framework is platform independent and scalable from a laptop to a server cluster. This, combined with the low cost, allows it to be used on the desktop by a service supplier/application developer for testing their products, or scaled for deployment as part of a multi-vendor Parlay Gateway, controlling access to the services provided by that Gateway. The Framework can take advantage of any existing database on your system for which a JDBC 2.0 driver is available, or can run with its own supplied database (an open source database called HSQLDB).

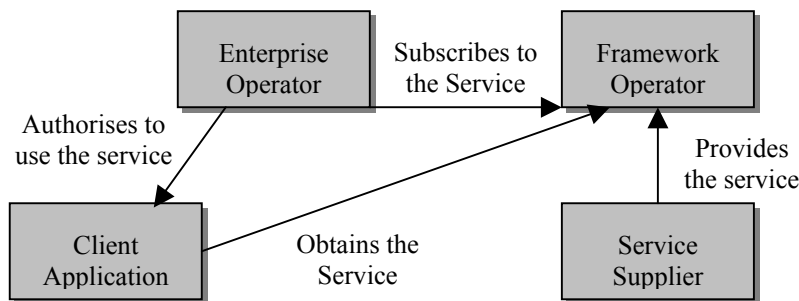
Our Framework is a full implementation of the Parlay 3.1/ 3GPP OSA Release 4 Framework specification. Parlay 3.1 and 3GPP OSA Release 4 will be the versions to which future releases must be backwards compatible. Applications written to use Parlay 2.1 will not be able to communicate with a 3.1 Framework or services. Likewise, a service written to use Parlay 2.1 will not be able to communicate with a Parlay 3.1 Framework or applications.



There are many differences between Parlay 2.1/3GPP OSA Release 99 and the latest release of the specifications. The earlier specifications had many faults and omissions, revealed during various multi-vendor trials, which have been addressed in the latest release of the specifications. These faults/omissions affect interoperability. The Parlay 2.0/2.1 IDL has been updated on numerous occasions since the specification was released, as a result of the faults/omissions.

The Open API Solutions OSA/Parlay Framework supports all of the Enterprise Operator interfaces specified in the Parlay 3.1 specification. The Enterprise Operator interfaces enable the full realisation of the Parlay subscription business model, allowing an Enterprise Operator to subscribe to services on behalf of the applications they manage, and to specify the level of service to be provided to each application.

Open API Solutions have considerable expertise in the telecommunications field and the OSA/Parlay space, not only with the Framework, but also with all of the OSA/Parlay APIs. To service suppliers, we can provide consultancy to help with the OSA/Parlay implementation of your service, enabling you to make the most of what OSA/Parlay has to offer.



The Parlay Subscription Business Model



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