Architecture for Location Based Application of Third geneRation Operation Support Systems

AlbatrOSS Trial – Delivery of Integrated Services

Introduction

The IST project AlbatrOSS specifies a 3rd generation operations support system (3G OSS) architecture applicable to an open 3G mobile telecommunications environment. It develops a set of OSS components to support the delivery of innovative services for roaming end users in a personalised mobile data service environment.

The project validates the architecture and components through the operation of trials. Trial 2 in the second phase of the project consists of three sub-trial systems, each of which is intended to validate solutions to a number of 3G OSS issues identified by the AlbatrOSS project. Delivery of Integrated Services sub-trial is presented below.

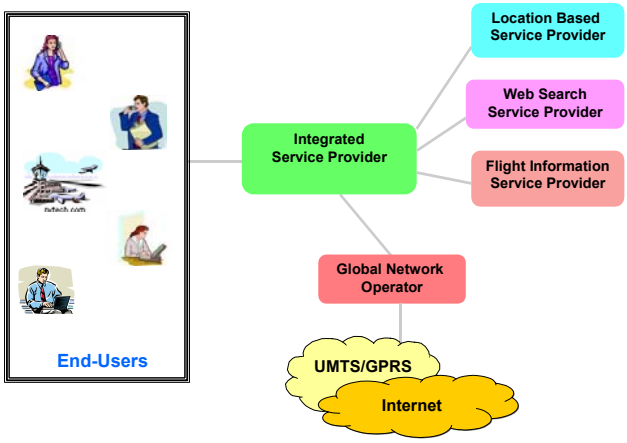
Goal

New 3G opportunities will encourage diversity in the wealth of new services becoming available to customers. Unlike the traditional portal model, where the network operator needs to be convinced of the viability of the service prior to launch, the 3G context will facilitate creativity and the flow of services to customers.

The necessity for the network operators and Service Providers to deploy quickly and easily new value-added services will be a major constraint for the future business environment. This trend will have a major impact on the OSS role and architecture.

The ***service aggregation concept*** states that service providers will build their frontal services by putting together several 3rd party services. For instance, these 3rd party services will deliver content, contextual information (geo-location, terminal capabilities, user's availability status etc.) or they will enable connectivity (communication service). By aggregating all these services, the service provider (called ***Integrated Service Provider, ISP***) will be able to deliver integrated and end-to-end managed services to his end-users.

The role of the Integrated Service Provider is not limited to the aggregation of 3rd party services, one main aspect concerns end-to-end management of the service and this has to be integrated to the service life cycle.



Subtrial Context

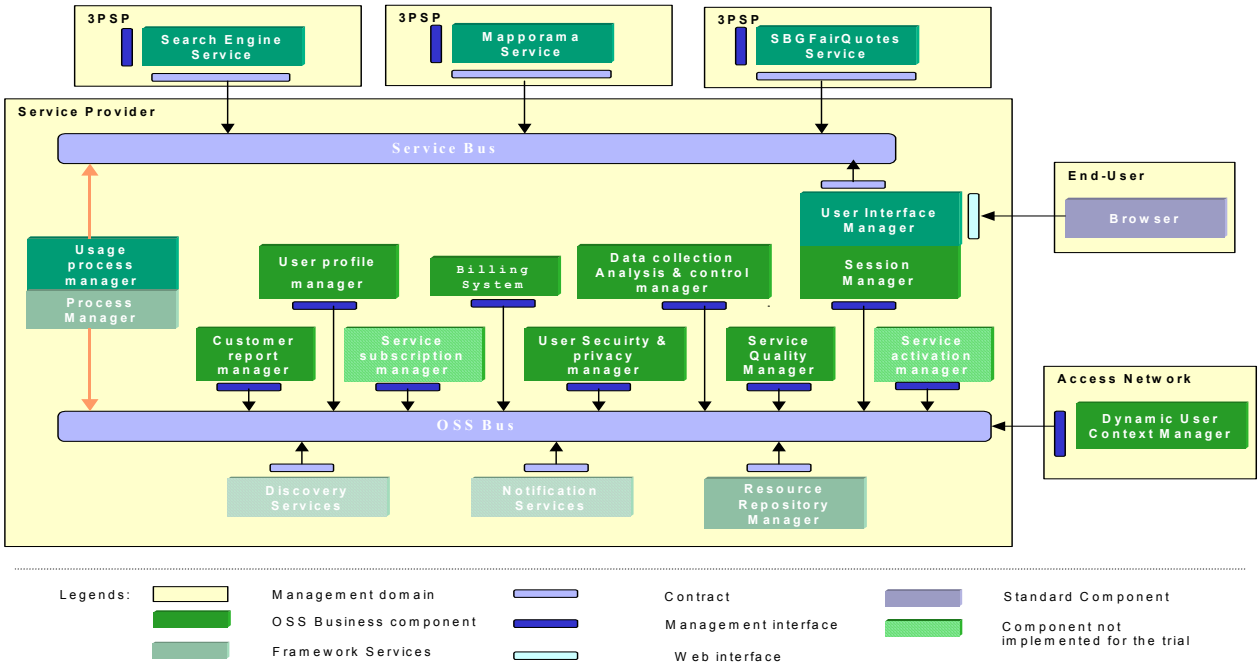
Scenarios

The scenario executed in the DIS sub-trial is defined from two perspectives. First, the end-user one, which accesses to the aggregated services and functions related to the service personalisation as well as CRM information. The second one concerns the ISP and the delivery and management of integrated services through service life-cycle phases.

In the end-user scenario, the end-user subscribes and accesses to a ***location-based travel assistant***. This travel assistant service results from the integration of several basic services provided by multiple third party providers including: Location Based Services, Flight schedule information and Location Based Web Search. The Network Operator provides connectivity services: IP connectivity as well as GPRS connectivity. Therefore end-user from a

single access and subscription will get access to range of content and the possibility to access this from different networks and devices. Moreover, the end-user gets the possibility to personalised services, through an access to his user profile and also can access reports concerning the billing, service usage and performance information against SLA.

Sub-trial System



Subtrial Architecture

The solution proposed is based on NGOSS principles and distributes the components into 3 layers:

1. **The framework services**, grouping a set of OSS functional blocks providing facilities for design, integration and operation of services: the *Process Manager*, in charge of executing the business logic, the *Resource Repository Manager,* providing transparent access to shared information (SID).
2. **The OSS business components**, they are dedicated to specific business process as described by eTOM: *Session Manager*, *User Profile Manager*, *User Security & Privacy Manager, Data Collection Analysis & Control Manager*, *Service Quality Manager* (based on HP OV SQM), *Billing system* and *Customer Report Manager*.
3. The top layer corresponds to the **core service components**. It allows integration and aggregation of 3rd Party Content Providers, such as: *Search Engine Service*, *Location Based Service*, *Flight information service*. Each of these services integrates a management interface providing necessary information to the ISP for the support of an integrated and end-to-end management. The Connectivity Provider provides access to network resources through *Parlay* X interface (based on Lucent Milife OSA/Parlay SDK platform).

The sub-trial system includes also a Service Creation environment, enabling to implement the business logic and modelling the service and service components.

All services and OSS components are defined as Web Services.

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