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Overview

Oracle Communications Billing and Revenue Management (BRM) platform provides convergent charging, discounts, balance management and subscriber management for online charging solution. Oracle gained the BRM platform, which forms the basis of the real-time (as well as off-line) revenue management capabilities, when it acquired Portal Software in 2006. Its offline network mediation capabilities come from its 2006 acquisition of MetaSolv.

Oracle provides complex rating and online mediation capabilities for simple and complex data services. This is a rapidly growing opportunity driven by CSPs' push to offer services that are more advanced to pre-paid mobile customers. In this regard, they compete with other complex rating suppliers such as **LHS**, **Highdeal**, **Convergys**, and some of the major NEMs. We estimate Oracle's real-time charging revenues in 2006 to be \$25 million.

Oracle Communications Billing and Revenue Management platform is a convergent real-time revenue management application that gives CSPs an end-to-end view of customers across all revenue streams. It provides a view of the customer that includes all of their services, balances, devices and relationships. The BRM platform is the foundation for Oracle's real-time charging solution. Optional extensions include the Oracle Communications AAA Gateway Manager, the Oracle Communications Diameter Manager, the Oracle Communications Resource Reservation Manager, and the Oracle Communications TIMOS Data Manager.

Table 1: Components of Oracle's real-time charging solution

Component	Description
Oracle Communications Billing and Revenue Management Server	Delivers convergent real-time rating, charging and balance management functions. Supports complex discount models and multiple rating models such as time-based, event-based, QoS-based and volume-based. Delivers complete subscriber management capabilities.
Batch Processor	Convergent billing, i.e. processing of both pre-paid and post-paid events for rating and invoicing purposes, is accomplished through a single Billing

Component	Description
AAA Gateway	and Revenue Management Platform Provides resilient, real-time integration to the network via DIAMETER, RADIUS and proprietary protocols. Productized integration is provided for HP OpenCall today. Handles the balancing and routing of network requests.
TIMOS	Delivers in-memory intelligent cache to support authorization, balance lookups and reservation for active sessions
Oracle Communications Network Mediation	Provides convergent mediation for multiservice, IP, and mobile networks. It provides network data collection, aggregation, and correlation for billing, reporting, and analytics.

Source: Oracle, OSS Observer

There are three scenarios for CSP deployment of convergent real-time charging:

1. Deploy basic pre-paid data as an extension of pre-paid voice while leaving post-pay services as a separate system. These deployments involve the addition of an active mediation systems interfacing to data networking, complementing IN-prepaid voice support. The active mediation may come from an ISV or may come from an equipment vendor.
2. Deploy advanced pre-paid data as an adjunct to existing pre-paid voice. These deployments involve the addition of active mediation and complex rating to complement IN-prepaid voice support.
3. Deploy a single convergent system that supports voice and data services for pre-paid and post-paid customers with a single rating system. There are a very small number of instances where this has been done, nearly all in emerging markets with limited existing infrastructure

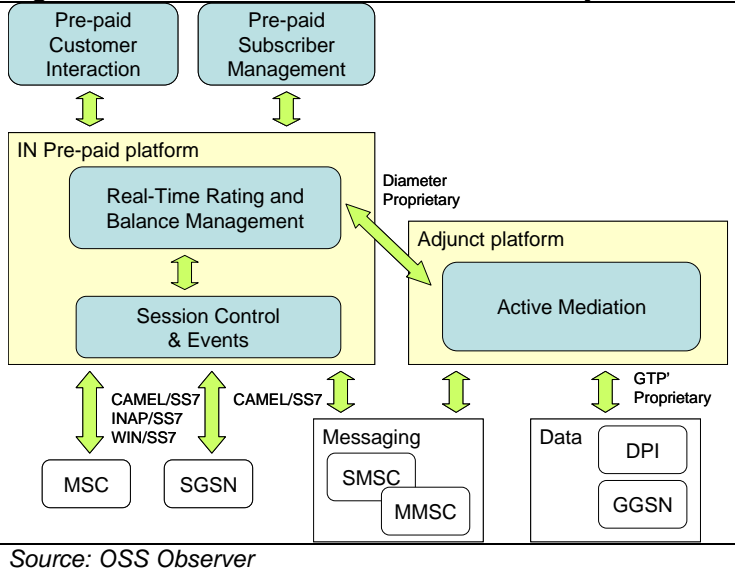
These scenarios are described in more detail in OSS Observer's Real-time Charging Outlook – October 2007.



Scenario 1

In scenario 1, Oracle's products are deployed as an adjunct platform for active mediation, with HP for the IN pre-paid platform (or DIAMETER compliant IN), and third party vendors for customer interaction and subscriber management as shown in figure 1 below.

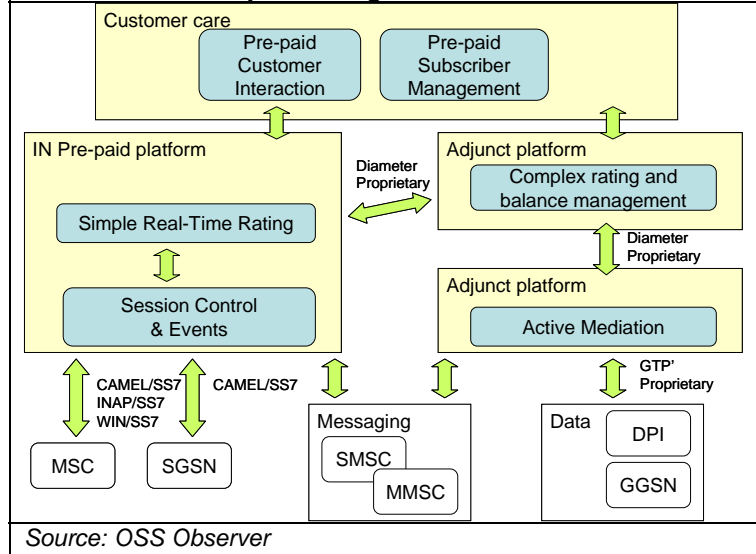
Figure 1: RTC scenario 1: active mediation adjunct



Scenario 2

In scenario 2, Oracle's products are deployed as an adjunct platform for complex rating and balance management, with HP for the IN pre-paid platform (or DIAMETER compliant IN) integrating to third party vendors for converged customer care as shown in figure 2 below.

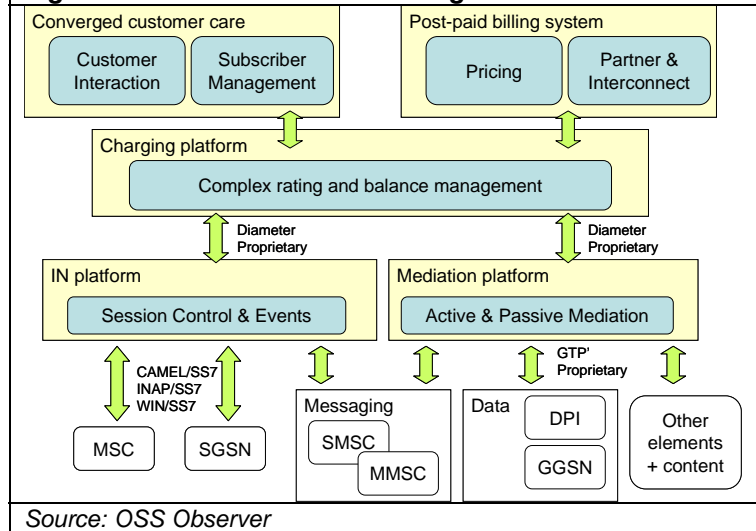
Figure 2: RTC scenario 2: adjunct platform for data services and complex rating



Scenario 3

In the third scenario, Oracle's products are deployed as the convergent charging platform for all pre- and post-paid services integrated to HP OpenCall as the IN (or DIAMETER compliant IN) and integrated to third party vendors for, converged customer care and post-paid billing as shown in Figure 3 below. Note: The Oracle BRM platform does also provide full support for post-paid billing and Oracle's Siebel CRM application provides full support for Customer Care and Self-Care.

Figure 3: RTC Scenario 3: Converged Platform





OSS Observer Analysis

Oracle has real-time charging deployments with several tier-1 and tier-2 CSPs including **Vodafone** properties, **France Telecom/Orange** properties, **Telenor Mobile**, **Telecom Italia**, **Telefonica** properties, **Swisscom Mobile**, **Telekom Malaysia**, **PCCW**, **BayanTel** and **US Cellular**. At Orange Switzerland, Poland and Spain Oracle's real-time charging solution is deployed as a complete convergent charging solution delivering complex rating and balance management in support of voice, data and content services as described in scenario 3 (figure 3). At **TUSmobile**, in Slovenia, it is deployed as the charging platform in an end-to-end converged solution. At Vodafone Spain and Pacific, it is deployed as the convergent charging platform for GPRS, value-added services and messaging services as described in scenario 2 (figure 2).

Oracle's real-time charging solution can support the complex discounting, offers, tax requirements normally associated with offline billing solutions. It is the same rating platform used in Oracle Communications Billing and Revenue Management for offline billing. (Hence being referred to as a convergent platform) Oracle's success in Orange/France Telecom, as well as other key Communications Service Providers gives it credibility in the telecom market.

Oracle's partnership with HP makes good sense as there is not much product overlap and Oracle does not compete with HP for systems integration business. Oracle does not directly provide support for legacy session control (e.g. SS7, CAMEL, IN), so it relies on partners such as HP.

Ericsson's planned acquisition of LHS demonstrates the NEMs' intention to deliver complete billing solutions—not just pre-paid. Their position in pre-paid makes them a serious threat to any billing company with ambitions to deliver real-time charging.

Oracle has the advantage over small ISVs of not being an acquisition target for competing NEMs so partnerships make sense. Oracle makes a good partner for system integrators, since it is already well positioned with them, and does not provide systems integration services. Oracle benefits from its acquisition of **MetaSolv**, which brought them mediation capabilities.

Currently, most real-time charging deployments have a large systems integration component. We expect Oracle to attack this issue with more integrated real-time charging, SDP and billing solutions over time.