



Content Charging and Revenue Chain Management

Industry

Next Generation Mobile Service Providers

Business Challenge

A complete content charging and revenue chain management solution

Technology Solution

Am-beo Universal Rating Engine

Enterprise Hardware Platform

Scaleable Intel® architecture servers

SOLUTION ARCHITECTS



Solution Blueprint:
Content Charging and
Revenue Chain Management

Solution Provider:
Am-Beo

MEETING NEW MARKET DEMANDS

The Content Charging and Revenue Chain Management Solution facilitates next generation mobile service providers in the deployment of content and next generation services through advanced rating, partner management, settlement, and reconciliation. It represents a complete solution for the operator, future proofing the business for the challenges of the new wireless world.

THE BUSINESS CHALLENGE

3G and new wireless technologies are unleashing a capacity on the telecommunications market that will drive new services, revenue streams and customers. There are many considerations for the operator here, from the management of multiple, incompatible yet concurrent business models, to the explosion in customer types and profiles. As the technology develops, the communications aspect becomes almost transparent, as does the technology itself, and this challenges the historical assumptions of the telecommunications market. As a result, there is a growing need to expand the thinking within operators, and to prepare for the unexpected.

In the technology and solutions selection process it is necessary to prepare for an uncertain future. The need for flexibility in content charging and partner relationship management takes on an even greater importance as this market develops. The fact that per-second billing has been immediately supplanted by per-megabyte billing in the first significant wave of mobile data applications, is a migratory tactic, and unsustainable in the long term. Value-based charging and content-based rating will emerge as the services become more valuable, and this will lead to new complexities and challenges in billing, and will reflect new types of customer.

The services that are being developed and deployed are run not by telecommunications companies, but by third party providers who specialize in particular areas. This expansion of the value chain creates a need to manage those third parties every bit as thoroughly as customers are managed. Content settlement, much the same as retail billing, requires post-settlement account management, account monitoring, and what has become known as partner self-care. This, too, is a new departure for the industry, and needs to be carefully managed.

THE SOLUTION OVERVIEW

Deployed on Intel® architecture and Hewlett-Packard hardware, Oracle technology combines with Am-Beo's rate-rec product to provide a complete content charging and revenue chain management solution. The solution includes best of breed service management, rules based rating functionality, and extends to partner relationship and revenue chain management.

The Universal Associative Rating Engine* from Am-Beo provides a generic interface for new services, facilitating unanticipated rating scenarios based on any metric. It also allows associative, or point-to-point rating functionality. This allows associations to be used in content rating just as the association between originating and terminating geographies has historically been used in voice telephony.

The solution will identify and manage thousands of concurrent services, reporting on trends through the Am-Beo eReporting suite, demonstrating considerable decision support through advanced reports and online analysis tools.

The rate-rec eReporting suite, and the rate-rec eAnalysis tools facilitate mapping and reporting on service usage, profitability, pickup and transfers. The revenue chain management function will allow the dissection of revenues between content partners and other third party members of the value chain, and the reporting structures can be extended to give partners a view on their services and content.

The combined solution covers everything a mobile content provider is likely to need as the evolution of mobile data continues, acknowledging the changing nature of customers, products and services. Its inbuilt flexibility addresses the need for adaptive service management, as new and ever more complex services emerge, and as the pricing and rating of those services becomes more innovative.

TECHNOLOGY

The Content Charging and Revenue Chain Management solution is based on Am-Beo's rate-rec solution deployed on Intel® architecture, using Hewlett-Packard servers and running Oracle9i. Both Corba* and RMI* are used as middleware standards, facilitating integration with all external systems, and allowing for real time deployment. The architecture of the solution permits distribution, and therefore the solution can be deployed on a multitude of HP-UX 11i Intel® Itanium™ servers, operating in parallel, and serving either the client or the engines or both.

The Content Charging and Revenue Chain Management Solution has been benchmarked on an Intel 32-bit architecture at over 3.7 million transactions phc (per hour/per CPU) running Oracle8.1.7 on a HP Microsoft* Windows* 2000 server, at full persistence. The recommended deployment is running Oracle9i on an Intel 64-bit architecture on HP-UX 11i for future proof scalability and flexibility.

TARGET MARKET AND CUSTOMER

The solution is targeted at telco product managers looking to roll out new and advanced services quickly, with highly flexible, highly changeable, and potentially innovative pricing structures. It is aimed at marketing managers who are seeking to get beyond the restrictions of the existing billing infrastructure with pricing schemes that are attractive, and will lend themselves to increased revenue. It is positioned for billing managers who need easily manageable systems and IT managers who are seeking standards based, high performance solutions which can easily be integrated.

This solution was developed for the mobile operator looking to maximize its return on investment in next generation products and services. Mobile data is an expensive business, but the potential rewards are great. In order to maximize the rewards, it is necessary to develop an understanding of the market, to provide multiple diverse services, and proactively to counter competitive threats through intelligent trend mapping and monitoring. Identifying the threat represents half the battle – only where the tools exist to counter that threat through rapid deployment and adjustment of existing products and services, including the pricing plans and packaging that accompany those services, can the operator reap the benefits of market awareness.

This solution from Oracle and Am-Beo empowers mobile data operators to identify, isolate and negate threats to their business. It allows operators to experiment and to learn, test and deploy, measure and improve. These new markets are open to everyone – the most flexible operators will be the ones that succeed.

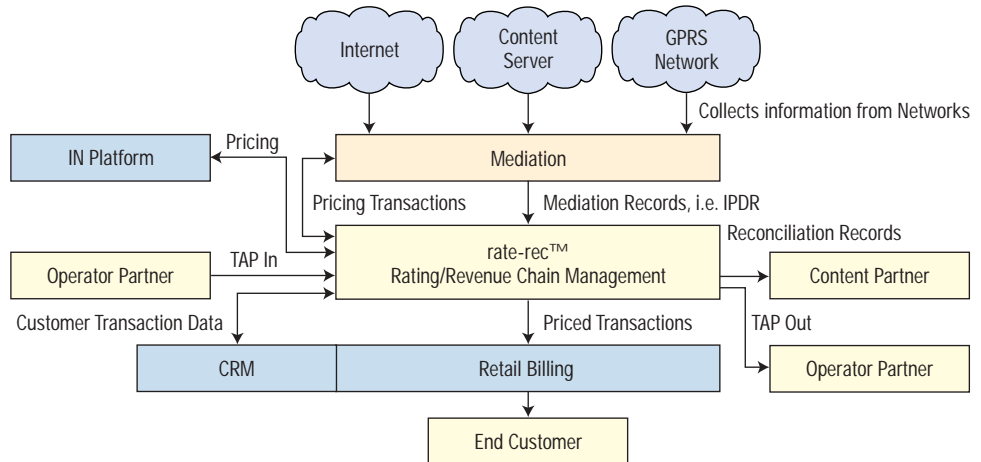
CUSTOMER VALUE PROPOSITION

The Content Charging and Revenue Chain Management Solution from Am-Beo and Oracle on Intel/HP Architecture represents a strategic tool for the development and consolidation of significant market share in the next generation mobile data market. There are a number of key areas that facilitate this:

- It unifies service management function channels, representing a single point for converging all price plans, and managing relationships with partners in the value chain
- Its enormous pricing flexibility protects the investment by leveraging existing technologies, maximising the use of existing systems and thereby minimizing the risk to existing revenue streams in the deployment phase.
- The eAnalysis and eReporting functions allow for content optimization, and, governed by extensive web based security, the business processes around this optimization can be driven internally by content managers, or externally by the content providers themselves.
- The generic nature of the interface and the power of the reporting function facilitate business model mapping. Pricing and content management are driven according to various business models, and reporting on the key performance indicators that drive success in those models, ultimately driving stakeholder value.

FUNCTIONAL BUSINESS CONCEPT

The Content Charging and Revenue Chain Management solution is a part of the BSS infrastructure that interfaces with content mediation and other systems. It manages dynamic content pricing structures and settlement, and partner interfaces such as settlement and reporting.



The solution facilitates the deployment of business models around content and other next generation services, and supports the processes that flow around those business models. The rapid service deployment capacity is complemented by an extensive performance and capacity reporting function, including numerous reporting and analysis tools, enabling cubic manipulation of traffic and performance data. Decision support reporting and analysis is also supported, with web-based drill down reports available through the client. These reports can be interactive, and deployed remotely in real-time for field sales personnel, off-site content partners, and other stakeholders.

The Application Integration Framework (see System Architecture below) exposes hundreds of fully published and documented real-time API's for interconnection with other systems, as in the diagram. The extensible and distributable nature of the solution future-proofs your business and leverages the existing infrastructure, thereby extending the life of existing billing systems.

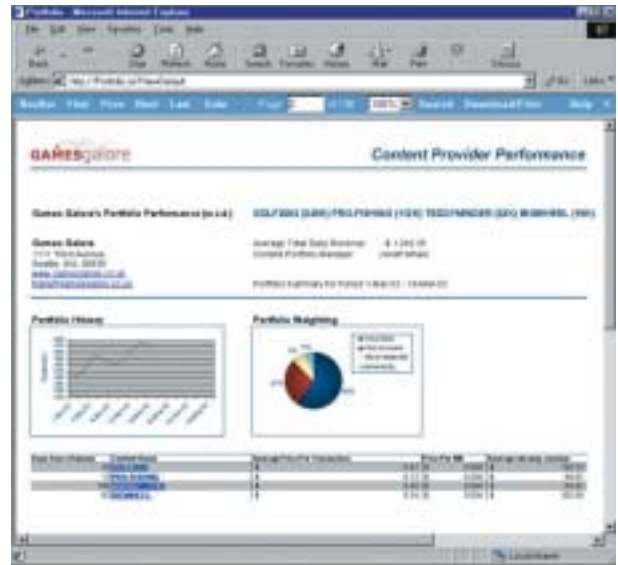
USER EXPERIENCE



This is an example Rate Plan, where a weekday MMS (Multimedia Messaging Services) transaction is rated differently for photos, graphs and notifications. All of the descriptive transaction attributes for each MMS transaction may be used in this process, as demonstrated above.

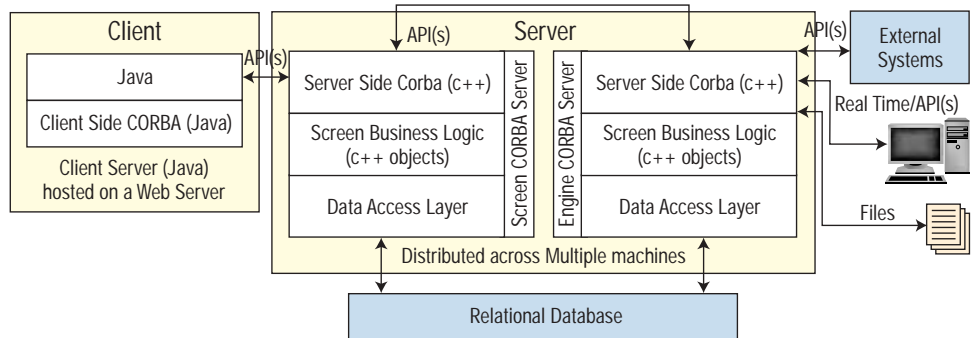


A video on demand transaction can be rated according to volume and according to service quality. In this example the 'numberOfMegaBytes' attribute is used to drive the price, as are the 'numAudioStreams' and 'numVideoStreams' attributes.



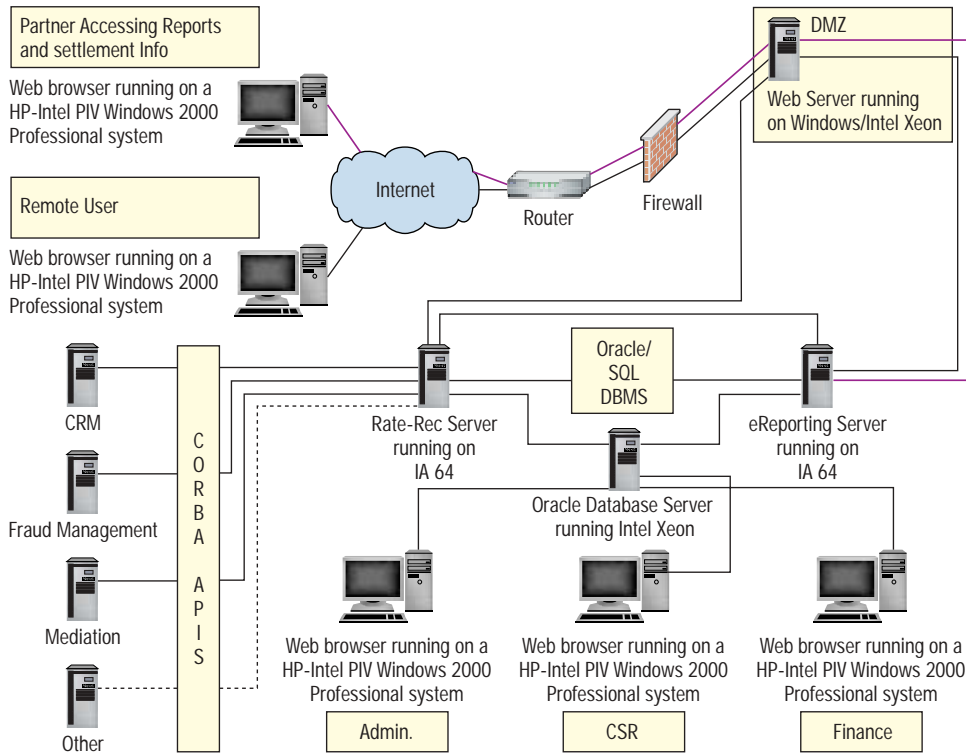
This is a report for a fictional gaming company, called Games Galore. It demonstrates a report on the content that the company delivers. From this, it is evident that Golf2002 is its leading revenue generator, generating almost \$800 per day. The total average daily revenue for this content provider is more than \$1,200. Several parties, including the content provider itself via an extranet, can access this report.

SOFTWARE ARCHITECTURE



The core solution architecture revolves around one or more HP-UX 11i Intel® Itanium™ servers bearing the rate-rec application and services, that are exposed through the API layer for user and engine interactions. The screen Corba services are invoked by the Java* client, but can also be accessed by any other application for the purposes of database manipulation. The engine Corba services are managed by external systems, and indirectly by the client through the screen services (see functional description, above). The entire application invokes an Oracle9i database that can be on the same or a remote machine, and can be distributed (both the application and the database) across multiple servers in multiple locations.

SYSTEM ARCHITECTURE



The Content Charging and Revenue Chain Management solution can be accessed locally or remotely through a web client, and interfaces with other components within the BSS/OSS via a suite of Corba based APIs, and other interfaces using the Application Integration Framework (AIF) that comes with the rate-rec product.

LEARN MORE ABOUT THIS INNOVATIVE SOLUTION

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