## BSS:
### The Foundation of Customer-Centric IMS

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IP Multimedia Subsystem (IMS) is expected to radically alter the way in which communications services are delivered and accessed. By facilitating a single, coherent network capable of delivering services across a variety of access channels, IMS will enable operators to break from their traditional reliance on separate networks for fixed and mobile voice, data and video services. Among the many hoped-for benefits, IMS will generate new revenue streams, permit deployment of new and multiple services with faster time to market, increase average revenue per user (ARPU), eliminate duplicate systems and reduce costs.

The flip side is that IMS will raise the bar on customer support and service requirements. As new offerings proliferate, customers will demand a single sign-on to all their services, a single customer care contact point, personalized price plans and convenient payment methods. In sum, they will want a "customer-centric" approach to service and support. Therein resides the potential weak spot of some operators' IMS plans.

Responsibility for support and service functions resides in an area that, for most operators, has evolved little over the last 20 years: business support systems (BSS). Though perfectly adequate for the days of POTS – "one circuit/one service" – most traditional BSS systems lack the flexibility and scalability to support customer requirements in a complex IMS environment.

Service providers need to address this challenge if their IMS ambitions are to take root in the marketplace, and they have little time to act. Dwindling revenue from legacy services, rising competition, higher costs and the need for new efficiency gains all have increased pressure on operators, fueling big wagers on IMS.

To make IMS work, providers must adopt a new customer-centric model of convergent, network-independent BSS with the scalability and responsiveness to support rapid change and complex, content-rich services. This new model will require significant commitment to a BSS that delivers on a spectrum of requirements, ranging from flexible pricing and online charging for customers, to measures that improve risk management for the operator. But, the end result will be a fully-realized vision of IMS: long-term, profitable relationships with customers who remain loyal to the operator's brand.

### Pricing and Charging Flexibility

An IMS-ready BSS and billing system must incorporate a flexible rating or charging engine that is able to support any basis of pricing, and whatever services may emerge in the future, including value-based pricing models. For example, streamed music purchases, videoconferencing sessions and interactive games may need to be priced by different measures – such as by transaction or duration.

Other desirable attributes of the rating/charging engine would include:

·   The ability to accommodate 'quality of service' (QoS) factors in pricing models where appropriate.

·   Systems that enable the rapid introduction of new tariffs or the alteration of existing price structures in order to support new services or respond quickly to changing market conditions.

·   Comprehensive and easy to apply discounting capabilities that can be used across products and services in order to provide incentives to subscribers and to reward particular usage patterns.

### Online Charging in Real-Time

Because real-time, IP-based transactions create 'immediate' service expectations in the mind of the user, flexibility in charging must also extend to the online environment.  To avoid losing transactions, customers and revenue, online charging systems must provide:

·   Very fast response times
·   High availability
·   Advanced credit management facilities
·   Access to the full range of services (for example, across prepaid and postpaid)

In addition, online charging systems need to promote credit management across services. This is especially true for IMS services, where the credit risks for the operator are potentially greater due to the expansion in higher-value content services supplied via third-party providers. In an environment where the operator must pay the content provider even if the retail subscriber does not, credit management will be increasingly important.



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### Converting Services into Revenue

Obvious though it may seem, it's vital to state that the billing system must help operators to turn services into revenue.  Two considerations come into play:

·   <u>Full support for real-time transactions</u>.   The system must check credit balances, charges, discounts, loyalty points and provide authorization in real time before a customer can access the service.

·   <u>Flexible credit parameters</u>.  Online charging systems should offer different rules on how a credit is used.  For example, funds could be reserved when the service is requested, with

the actual charge levied once the service has been delivered.  The system should also show customers the cost of a service so they can decide whether to proceed.

### Sophisticated Partner Management and Settlement

One of the chief appeals of IMS is the ability to quickly turn up new services.  Just as in the media business, operators will compete on their ability to deliver a constant stream of exciting new content and services.  Increasingly, they will rely on partners to help create and deliver services to the end user. Support systems will need to accommodate and drive this development. The billing system, for instance, should be able to handle all aspects of service delivery and revenue settlement associated with partner activities.

Settlement and partner management is a complex process that goes far beyond managing revenue flows between parties. The value-chains that accompany the growth of content services will offer operators the opportunity to derive income from each transaction.

### Conditional Settlement

Settlement periods for retail billing and various merchants won't always match.  As a result, the billing system should provide 'conditional settlement' to manage such disparate settlement periods.  With conditional settlement, the operator can settle with merchants when the consumer pays, thus improving risk management and cash flow.



### Scalability and Availability

As partner activity and service portfolios grow, so do the demands for high scalability and availability in the billing system.  Rating and billing will be used by all IMS applications, and the system will be expected to handle the increased volumes of subscribers, higher numbers of transactions and a growing body of content/service provider partners.  As a result:

· Scalability needs to be achieved in an operationally efficient and manageable way, including the option of using multiple smaller servers, rather than a huge single server, to reduce costs.

· Availability needs to be a top priority, as down-time is costly and potentially increases operators' risk of credit exposure.

### Migration and Implementation

A handful of aggressive IMS transition plans call for a short window to migrate customers from the legacy network to IMS.  But for most operators, this type of flash cut switchover will be the

exception rather than the rule.  The majority of service providers are likely to run legacy and IMS networks side-by-side for a decade or more as they gradually migrate customers to IMS.  During this transition period, IMS products – and the BSS that support them – must co-exist.

Further, operators need to recognize that implementing IMS projects will involve greater challenges than was the case with previous network upgrades.  One reason: A natural offshoot of using multiple vendors will be increased complexity of the implementation. The rise in the number of partners, and in the types of content and services delivered, will increase the need for open system architectures, products with published application program interfaces (APIs) and a proven integration strategy.

**Conclusions**

IMS holds strong potential to drive new services, new revenue streams, enhance customer loyalty and open the way for more cost-efficient support infrastructures.  But IMS will not emerge in a vacuum, separate from the BSS that govern the ability to deliver services and support.  The success of convergent IMS services hinges on tight integration with convergent BSS.

To realize the vision of IMS, operators must make customer centricity a top priority, adopting a new way of thinking that puts the customer the central focus of the business.  Most importantly, operators must commit to support systems that "operationalize" this new business logic, capture revenue and deliver the full potential of IMS.

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