



WHITE PAPER

A Framework for M-Commerce Wireless Commerce Solutions



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Introduction

Today's communications market is moving quickly toward the promise of communications, commerce, and content available anytime, anywhere, and on any device. Service providers are no longer simply network operators, but are evolving to become providers of rich, interactive media, productivity services, and retail experiences. Consumer expectations have also evolved to where the term wireless no longer implies just voice service, but rather represents a complex infrastructure to which one connects—in real time, from any place—to be informed, entertained, or engaged in visual or audio communication, or to buy goods and services. The constant exchange of value among the multitude of constituents is the pulse of this infrastructure, the underlying and measurable component of which is wireless commerce. This suggests that service providers are not only challenged with a need to quickly deploy new services, but also to measure and account for those services while honoring a new ecosystem comprised of diverse stakeholders and new and complex value chains.

This rapid evolution of the mobile market is causing service providers to seek back-office solutions that will allow them to become participants in, and enablers of, this new ecosystem without compromising their current services or support of existing subscribers. Those back-office systems that most directly impact the subscriber experience are, in fact, the ones that have the greatest influence on a service provider's success or failure. To be successful, service providers must build a flexible and integrated wireless commerce back-end that can be delivered with a subscriber-centric framework. The back-end must support the rapid deployment of new services, while the subscriber-centric framework ensures a high-quality, integrated, and consistent user experience carried through systems including billing, customer care, prepaid, roaming, clearing, and self-care services.

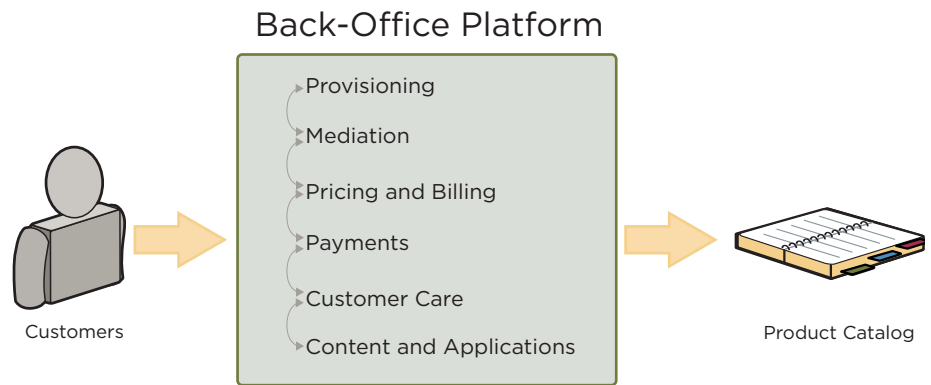
Legacy Limitations

More than ever, subscriber demands are driving innovation in telecommunications. Whether it's a teenager downloading a ring tone to his cell phone, a businesswoman text-messaging her assistant, or a remote employee retrieving email on his personal digital assistant (PDA), consumers and businesses are demanding mobility, "always-on" access, and ease of use at the user level—and more critically, at the device level. In short, consumers want more control over the selection and management of their services, including how and when they pay for them. Service providers must work to enhance user loyalty by providing relevant options that are continuously improved and enhanced as market demands and technologies evolve.

These changes in the communications landscape have a profound effect on the billing environment and its business and operations support systems (BSS/OSS). Most existing BSS/OSS lack the flexibility to quickly integrate new service offerings, effectively creating barriers between customers and the products they want to buy. These impediments can lead to inefficient product delivery which, in turn, leads to higher churn rates. Because of the limitations of legacy systems, service providers can, at best, only control the customer experience in a reactive manner and they lose the ability to adapt quickly and take advantage of new opportunities.

The ideal back-office platform must be flexible enough to support an increasingly diverse consumer market by enabling carriers to support the rapid introduction of new services. This capability will enhance the service provider's ability to quickly provision new offerings to business and consumer end users. The next-generation of wireless commerce solutions should provide an open door between customers and their desired products and services by connecting them through a seamless, order-to-cash environment. Next-generation commerce systems are an alignment opportunity, pushing intelligence to the end user, driving costs down, increasing speed of product delivery, and dramatically enhancing the customer experience.

Back-Office Platform



Wireless commerce solutions should provide an open door between customer and their desired products with automatic purchase and provisioning.

Managed Services Provide Framework

As service providers of all sizes move toward more advanced offerings, some are more able than others to handle the new requirements. Emerging services offered to the mobile market today encompass a range of new specialties, such as music, video, pictures, gaming, etc., most of which are completely new to the communications market. The production and fulfillment of these services go well beyond the scope of traditional telecom services. As a result, many service providers will choose to engage outside partners who can manage all or some steps along the value chain. This makes sound financial sense. Carriers can leverage the ability to pay for the service levels they need, when needed, balancing expenses with revenue flows. Employing managed solutions avoids significant up-front capital and IT expenditures, and with the rapidly evolving communications environment, this also offers the ability for carriers to quickly upgrade to systems that readily adapt to new technological challenges.

VeriSign, with unmatched expertise in Internet security, e-commerce payments, and wireless solutions, offers service providers unique support in building a framework for wireless commerce services. VeriSign offers a broad portfolio of Intelligent Communications, Commerce, and ContentSM (IC3SM) services that reduce complexity and help bring new

FUTURE-PROOF PAYMENTS

The Yankee Group* recommends that the features of a payment platform include:

- Ease of Setup and Configuration
- Real-time Charging
- Support for Stored Value Accounts
- Partner Relationship Management and Settlement
- Authentication and Verification
- Customer Care

services to market quickly—at a lower total cost of ownership (TCO). The VeriSign® Wireless Commerce Suite, designed to accommodate the growing complexity of the mobile services ecosystem, serves as a flexible, carrier-grade, business and operations support system for the next-generation mobile operator, which in turn drives an unmatched and differentiated experience for the next-generation mobile subscriber.

Key features of the VeriSign Wireless Commerce Suite include complex bundling of prepaid, postpaid, and advanced pay services, account hierarchies, near real-time rating for voice and data, a comprehensive content catalog and supply chain featuring over 200,000 titles, voice and data roaming, a complete clearing and settlement service, and Web-based and mobile-based self-care services.

+ Billing and OSS

An integrated, comprehensive billing system has a positive effect on a company's complete service offering—from new services to pricing plans to customer service. VeriSign offers converged solutions that support the customer lifecycle from point of sale to customer care. A nearly seamless order-to-cash environment enables service providers to dramatically reduce TCO while optimizing the customer experience, bring new products and services to market, and launch new services to meet the needs of an increasingly diverse subscriber base.

+ Prepaid Platform

Service providers can meet the varied billing needs of their customers with billing options. The VeriSign® PrePayIN™ solution is a real-time rating and charging platform engineered to integrate into complex telecommunications networks. With an architecture specifically designed for growth, the VeriSign PrePayIN solution offers scalability and quick deployment times for next-generation mobile services, such as voice, data and messaging. This flexible solution comes complete with international support, multiple top-up options, and new services, such as voucher management and mobile virtual private network (VPN) services.

+ Settlement and Exchange Services

The VeriSign® Consolidated Clearing Platform helps ensure that subscribers are accurately billed regardless of when, where, or how they access their network. The platform provides clearing and settlement services that allow service providers to know their financial position with roaming partners for voice and data traffic. Web-based reporting tracks and analyzes the service providers' current financial position with roaming partners and helps lower the cost of roaming accounting operations. Wireless service providers benefit from the ability to make timely decisions based on valuable call detail record (CDR) data in standard financial marketing and fraud management reports.

+ Self-Care

As subscribers begin to use their phones or mobile devices for more than simple communications, their desire for convenient self-care has increased. VeriSign offers a variety of self-care solutions that support the entire subscriber lifecycle. VeriSign® Self-Service Set-up enables a customer to set up a new device and account; electronic bill payment and presentment gives subscribers access to their status and ability to pay; and automatic or short messaging service (SMS) top-up for prepaid service helps subscribers stay active. These easy-to-use services help ensure that service providers can meet the needs of their subscriber base anytime, anywhere.

+ Mobile Content

Offering information and rich media services will require integration with potentially large numbers of content providers. An important component of the next-generation BSS/OSS is the ability to manage the relationships with content providers that are part of the service

providers' deployment model. In addition to tracking content providers, the content-provider management component must maintain, calculate, and report revenue sharing and settlement agreements, manage content maintenance and use, and most importantly, must be able to guarantee the security and authenticity of those accessing the content and of the content itself. VeriSign content services manage content distribution, rights management, and clearing and financial settlement, and provides content on-boarding, aggregation, formatting, mediation, and delivery. Service providers can expand their brand portfolio with customized content acquisition portals that offer access to more than 200,000 ring tones, graphics, and games and the ability for their subscribers to exchange multimedia content across diverse devices and networks.

Framework for Tomorrow

While it addresses today's market demands, the VeriSign Wireless Commerce Suite also provides a foundation to support emerging mobile-commerce (m-commerce) capabilities—beginning today with rating for content and premium SMS while preparing for future solutions, such as mobile payments, mobile marketing, and mobile ticketing. VeriSign features a set of Intelligent Communications, Commerce, and Content services that serve today's needs while building for the future. VeriSign services help to reduce the costs and complexity of innovation, and allow the service provider to move more quickly to address market demands. M-commerce is an area of great promise for service providers, but the prospect of building the platform, relationships, and back-office systems can be daunting. While not currently widespread in any country, m-commerce services are emerging in many, and the Yankee Group predicts that the market will approach three-quarters of a billion dollars by 2008 in Western Europe alone.* The same report warns, "As these services grow, the systems used to process and bill for them will have to scale and adapt to the demands of network operators and their subscribers."

Conclusion

As service providers face the current and future evolution of their business model, it becomes more and more critical to partner with proven, effective solution providers. To meet the needs of today's quickly evolving market, VeriSign has assembled an extensive portfolio of wireless commerce services, arguably the industry's most comprehensive solution set. According to the Yankee Group,* "VeriSign has emerged as the best-positioned mobile-telecommunications service provider in the industry." VeriSign Intelligent Communications, Commerce, and Content services include the VeriSign Wireless Commerce Suite that meets subscribers' demands today, while building a flexible framework for the mobile commerce ecosystem of the future.

Visit us at www.VeriSign.com for more information.

*Levine, Joseph. "As the Mobile Commerce Market Grows, Mobile Payment Systems Must Meet Changing Needs," ©2004 The Yankee Group.

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