

Service Delivery Platform Market Trends

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Docid: 00011252

Publication Date: 0704

Publication Type: MARKET

Preview

The primary purpose of Service Delivery Platforms (SDPs) is to enable new services to be delivered quickly and effectively. For an SDP to be effective, however, it must adhere to and integrate with both business and operational processes. The lack of a standardized definition has made it difficult to evaluate the myriad of SDP solutions currently available in today's marketplace. This paper will discuss the SDP market dynamics as well as the state of SDP standards, who the market leaders are, the emerging trends of the SDP marketplace, and strategic planning implications.

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Executive Summary

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The late 1990s saw a period of unprecedented change in enterprise applications as the grip of client-server architectures gradually relaxed and allowed the entrance of n-tiered architectures. This represented the advent of the application server, a flexible compromise between the absolutes of the dumb terminal and the logic-heavy client PC. Although entrants into the application server ring were many and varied, they shared common advantages: database vendor abstraction, open standard programming models, high availability and scalability characteristics, and presentation frameworks, etc.

These transformations were triggered by business forces including the Internet boom, but none of it would have been possible without the proliferation of standards such as the TCP/IP protocol, the Java programming language, and the J2EE web application server architecture. It is against this backdrop of transformation that the telecom industry's era of rapid change began.

In today's new standards-supported environment, convergence of the voice and data worlds has become a true avenue for the production of new and better consumer and business services. We have seen the proliferation of various SIP programming libraries and products based on the SIP Application Server standard, and the IP Multimedia Subsystem standard. The Service Delivery Platform (SDP), whose power comes in large part from the quality and acceptance of these supporting standards, has rapidly gained acceptance as a widely applicable architectural pattern.

SDPs are a combination of hardware, software, and services that form a common architecture for the creation and delivery of services across multiple network types. SDPs are designed to enable the rapid development and deployment of new converged multimedia services, from basic POTS phone services to complex audio/video conferencing for multiplayer games (MPGs). In business applications, SDPs are focused on the integration of telecom and IT capabilities. Basically, SDPs comprise a set of service offerings, a support platform, and a set of enablers that together in symbiosis with existing operator platforms and business processes and across multiple network technologies, make it possible for operators to create their own services

From the carrier perspective, SDPs address the need for faster, easier, cheaper solutions for delivering services over the network. In the service provider community, however, there is angst and confusion as to the full potential of SDPs and which SDP can provide the best-in-class services. In addition, there is a lack of a standardized SDP definition making it difficult for many SDP developers to effectively communicate the benefits and capabilities of SDPs from both a cost and revenue perspective. And, because the term SDP is interpreted differently throughout the industry, service providers are finding it difficult to see the wide range of SDPs available on the market today.

By ensuring a consistent, highly automated, and reusable service environment, an SDP can greatly accelerate a positive Return on Investment (ROI).

Market Dynamics

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In today's market, enterprise and consumer expectations are for service providers to provide convenient, accessible, and familiar content, anywhere and everywhere. With an IP-centric foundation, service providers are not only looking for faster, cheaper, and easier ways to meet their subscribers' expectations, but how to best deliver those expectations.

The big mystery for service providers is how to connect the subscriber to the next great killer application and harvest new sources of revenues from existing network assets. Wireless and wireline network assets will become stale with flat lining revenue streams if there is not a way to connect all to media and content rich services regardless of access method.

Content must be managed and enabled, mobile devices require location based services and have a gateway to wireline assets for communications and messaging. Signaling must be standardized and seamless to all elements of application and devices so the ubiquity demands of the subscriber can be met. A bridge needs to be built that brings forward the best of the past from the Public Switched Telephone Network (PSTN) (caller ID, call forwarding, etc.) and combine it with existing Internet Protocol (IP) services like Voice over IP (VoIP) and what will be the best of the converged future like IPTV.

SDPs are being touted by software and telecommunications equipment vendors as not the next great killer environment for next generation communications services, but the pathway to the multitude of next generation telecommunications killer applications. Based on industry standards such as XML, HTTP, and Web services, SDPs integrates with network services products to provide end-to-end solutions for mobile and wireline operators.

Costs, revenue streams and speed of deployment are also requirements for service providers. Application deployment is great, but there is also back office processes needed to garner revenue from and as a result of new applications. SDPs provide the capabilities for service providers to achieve all of these objectives. SDPs are the transforming agents enabling service providers to not only create their own differentiated value, but to do so by providing their customers the ability to create their own value in the markets they serve.

To make it all happen, there needs to be a combination of technologies to bind a multitude of disparate access, network and application technologies making them to appear seamless and effortless to users. Traditional access technologies such as wireline and wireless devices will need to draw or push content through non-traditional protocols and applications. The bells and whistles of media rich services that so many service providers like to extol in ads and commercials are not a result of merely waving a magic wand. No single technology or concept exists or is on the horizon that can accomplish all of the promised delivery of content or services.

Service Delivery Platforms and IP Multimedia Subsystems

SDPs are a set of business processes and IT systems for defining applications and the policies that apply to them. SDPs link applications to subscriber profiles, enable rapid application development, support third-party contributors, and orchestrate the way applications interact with each other. Given that, however, there must be a way for applications to be accessible by the subscriber from a physical perspective. IMS has operational framework, processes and network/access facing elements to connect the subscriber to the application.

Utilizing the building blocks of Internet Protocol (IP) and Session Initiation Protocol (SIP), SDPs and IMS together can bridge the gap of previously disparate and incommunicado networks. Through implementations of SDPs and IMS, telecom providers are envisioning the long awaited convergence between the PSTN and cellular voice, cellular voice and cellular data, and dedicated, purpose-built networks and open, standards-based networks.

SDPs together with IMS hold the promise to fulfill the needs of service providers by freeing up the application layer as a function of the network. This application layer autonomy will allow service providers to introduce new services, applications and the ability to charge for them without the past headaches of integrating them into the network layers. As an access-agnostic technology, SDPs and

IMS allow service providers the additional flexibility to provide applications and services not based on any particular access method. Media rich content and services can be subscribed to and applied based up a service type versus access type.

Standards

As a software application, there has been little to no efforts applied with respect to standards. Sitting above the protocol layers, SDP Applications Programming Interfaces (APIs) are based on commonly used languages and applications such as HTML and XML. Integration to lower layers protocols such as SIP and IP are a common practice across all vendor SDP applications. The departure from standards may be in the area of database integration. Here, industry leaders such as Microsoft, Oracle and IBM will have proprietary services based on product suite applicability. Whether or not this is a hindrance to the propagation of SDP and IMS based applications and services is yet to be determined, There is some ambiguity in the service provider community as to how the proprieties of database integration with vendor A's SDP versus vendor B's SDP will impact the ubiquities of SDPs.

Market Leaders

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Microsoft

Microsoft Service Delivery Platform is a solution based on products and technologies from Microsoft and its partners. In February of 2006, Microsoft announced that its service delivery solution, Microsoft Connected Services Framework, had been adopted by more than a dozen of the world's leading communications companies, including Bell Canada, BT Retail, and Celcom Malaysia. Introduced in February 2005, Microsoft's Connected Services Framework product allows operators to aggregate, provision, and manages converged communications services for their subscribers, regardless of network or device.

Microsoft's SDP partnership network consists of the service creation, deployment, and execution environments for value-added data services for communications, commerce, collaboration, infotainment, and others. It provides a platform for content service solutions to integrate, manage, and provision content from third-party content providers. Based on industry standards such as XML, HTTP, and Web services, the Microsoft Service Delivery Platform can integrate with a variety of OSS, BSS, and network services products to provide end-to-end solutions for mobile and fixed-line operators. The Microsoft Service Delivery Platform provides a cost-effective and scalable solution. It helps operators increase customer satisfaction, improve profitability, and reduce deployment complexity and risks.

HP

The HP Service Delivery Platform blueprint helps service providers develop and deploy more sophisticated end user services across fixed, mobile and broadband networks. Deploying services within Service Delivery Platform architecture enables carriers to get to market faster with new niche services, reduce service deployment complexity, simplify service interaction and ease service management. The blueprint addresses the entirety of service delivery, including web and real-time IMS

services, from the core network to the edge and onto the end user's device of choice. Some features of HP's SDP include:

- Revenue sharing model for content providers.
- Standards-based development environment.
- Mobile device management.
- Defined service interaction methodology.
- Support for multiple underlying network architectures.
- Well defined security and policy mechanisms.
- SIP application server.
- Parlay/open services architecture.

Oracle

To accelerate the development and deployment of communications services on existing and next-generation networks, In February 2007, Oracle announced the Oracle Service Delivery Platform (SDP) Partner Initiative. Sharing a common vision for standards-based service delivery, Oracle and its partners have joined forces to collaborate and provide an expanded source of solutions to the communications industry. Partners including Independent Software Vendors (ISVs), infrastructure vendors, and System Integrators (SIs), can benefit from this initiative by using the Oracle SDP to deliver comprehensive, standards-based solutions to their customers.

Recognizing the market potential of SDPs, in 2006 Oracle set out on a path of acquisitions to compliment it existing SDP product offering and acquired Swedish SIP and telecomm infrastructure software and SIP developer Hotsip and Norway's Parlay/OSA developer Net4Call.

Oracle's Service Delivery Platform brings together the features of Hotsip and Net4Call with Oracle Fusion Middleware and Oracle Database to enable Telco Operators to quickly and efficiently deploy new data, voice, and multi-media services. In the Enterprise and ISV community, Oracle SDP provides a platform to build new and real-time, media-rich and voice-enabled applications. Oracle's SDP was designed to enable communication service providers, network operators and system integrators to evolve current silo-based networked investments into integrated multimedia services on existing and next generation communication Internet Protocol (IP) networks.

The Oracle SDP features are:

- Standards-based on open standards such as SIP and VoIP that ensure interoperability and allow new services to be deployed more quickly and economically.
- Support for legacy networks that provides a programming environment that extends J2EE for asynchronous event-based programming that is vital to support and leverage existing telecommunications networks.
- Messaging that provides facilities access to content from mobile devices across a variety of stand protocols including SMS and MMS.
- Network Adaptation Layer that provides a set of adapters to connect SDP to existing network elements and telecommunications equipment.
- Rapid Return on Investment (ROI) with out-of-the-box telco services to promote accelerated ROI.
- IMS solution that features a SIP Server supporting JSR 116 and SIP proxy/registrar, Location,

and IMS-compliant Presence services.

- BSS-SDP solution that brings together a complete Telco Business Support Systems suite with a standards-based Service Delivery Platform.
- Telco Performance that includes a Service Logic Execution Environment (SLEE) for high throughput/low-latency network interactions and utilizes Oracle Times Ten In-Memory Database for carrier-grade performance.

IBM

To thrive in the telecom universe, service providers must launch next generation services faster than the competition — with lower fixed costs and less risk. The IBM service delivery platform is an open standards-based, integrated environment. IBM has utilized an array of technology assets to power its service delivery platform solution. Those include:

- **IBM Service Provider Delivery Environment (SPDE)**--Includes the Application Delivery Environment, which collects and aggregates content from multiple sources, and the Integration Hub, which integrates functions and processes.
- **Content Management and Delivery**--Leverages IBM WebSphere Everyplace Mobile Portal, as well as digital rights management tools to manage the lifecycle of third-party digital content from ingestion to delivering optimized content to over 800 mobile devices.
- **Open Network Access**-- ncludes IBM WebSphere Everyplace Server for Telecom and IBM Rational® Application Developer to bring new services to market more quickly by providing 3rd party access to network services, features and resources through industry standard API's.
- **Unified Security Services**--Takes advantage of IBM Tivoli® Access Manager, IBM Tivoli Identity Manager and IBM Tivoli Federated Identity Management to help reduce administrative costs and improve the customer experience by synchronizing directories, provisioning users and providing single sign to employees, suppliers and customers.
- **Remote Access Services**--Uses IBM WebSphere Everyplace Connection Manager and tools from key IBM partners to provide revenue generating, reliable, security-rich remote access.
- **eCommerce for Service Providers**--Utilizes IBM WebSphere Commerce, IBM WebSphere Portal, IBM DB2 Content Manager and IBM DB2 Universal Database to provide online commerce, market trials and merchandising for both digital and physical goods.

Market Trends

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Application-oriented services are the engine that is driving the continued forecasted growth in the external services industry that is expected to grow from \$660 billion (US) in 2006, exceeding \$750 billion (US) by 2008. Of this vast market, applications services revenues are forecasted to approach \$30 billion (US) in the same time period. Services that are expected to make a drastic jump in demand by 2008 include:

- Online gaming demand up 68 percent.
- Video on-demand up 126 percent.
- Online music up 100 percent.
- Messaging for consumers up 74 percent.

- Messaging for business up 38 percent.

Service providers worldwide will be implementing some form of common service delivery platform, including a common user front end to most of their services and streamlined back-office system. Service providers will be venturing into uncharted territory by entering into competitive bidding for premium content distribution rights such as gaming video and online music. By 2010, content is forecasted to account for 25 percent of the cost of sale and 50 percent of the gross margin for residential service offerings.

Currently, however, with the posturing and positioning of SDP vendors, there is the risk that confusion will exist in the service provider community which may impede the progress of SDPs as readily available solutions platform. Perhaps too much attention has been given to development with not enough attention being given in keeping the market and potential customers for SDPs in the loop.

For SDPs to be successful, service providers and equipment manufactures need the ability to plan services around promised features and services. Forecasts for explosive growth in this market segment will not come to fruition if all that potential subscribers have to go on are vague executive summaries and proposed product specifications.

Without substance by which to formulate strategic planning around, service providers may be forced to remain within a silo service delivery approach, thus missing the opportunities to explore best of breed technologies because of ambiguous product information.

Strategic Planning Implications

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With SDPs still in the emerging stages, the implications for the enterprise and consumer markets are much less daunting than for the service provider and platform developer markets. It is still too early to tell how widely the deployment of SDPs will be, however, there are steps that can be taken, particularly for the enterprise, which can position them to take advantage of SDPs.

First and foremost is to be VoIP ready. IP, SIP, and IMS are being driven by the demands of a market looking for more ubiquity in voice communications. Although not a requirement, voice systems that are VoIP in nature will have a head start in realizing the benefits of SDP centric applications and services. VoIP should be considered from both a wireline and wireless perspective.

Secondly, is the need to be IPv6 capable. While SDPs are IP version agnostic, with the prospect of having billions of additional IP devices asking for addressing space across a converged global network can only be addressed by a massive influx of additional Network Address Translation (NAT) capabilities or by migrating all communications platforms IMS to a pure IPv6 backbone. Whether global communications reside within the arena of an IPv4, IPv6 or both, it would be wise for the enterprise in particular to be prepared to adopt an IPv6 direction. Better QoS and other delivery guarantees of IPv6 can only enhance the richness of any IMS content and should be planned for.

The primary purpose of the SDP is to enable new services to be rapidly delivered and sold to

subscribers therefore operators must focus on their target market and their subscriber's needs. And, to meet growing subscriber needs, operators have to grow their service offerings and often times this means growing their partner relationships. In addition, service providers must not only align their service delivery model with a focus on convergence, they must link their strategies to the market forces of supply and demand.

Enterprises should keep in mind that the industry has yet to come up with a standard SDP model and/or definition. Vendors say the reason for this is because the SDP marketplace is so competitive and that no operator wants its SDP to look like anyone else's. But, like everything else there is a downside to a lack of standardization. And, although the SDP market has made considerable progress, the market still has some very real challenges to overcome before it can truly take hold as a paradigm-changing technology in service provider networks.

[About the Author](#)

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