Removing the Risks from SDP Deployment

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An SDP Alliance White Paper

Operators are adopting end-to-end Service Delivery Platforms (SDPs) to increase service revenue growth and retain customers. They require these additional SDP enablers to achieve efficient service lifecycle management. Rapid rollout, operation and retirement of services are necessary to optimise service revenues. Historical operator experiences clearly highlight the significant risks associated with new platform deployments. The adoption of pre-integrated enablers removes integration risks, enables rapid return on investment and lowers total cost of ownership for SDPs. These pre-integrated SDP efficiencies will assist operators in converting service revenue into shareholder profit.

TheSDPAlliance
Service Delivery Platform

www.TheSDPAlliance.com

Table of Contents

EXECUTIVE SUMMARY

The SDP Alliance provides operators and supporting System Integrators (SIs) with a low risk, rapidly deployable SDP solution set. Operators require this solution to combat the treat from Internet players and stagnating traditional service revenues. Adoption of the SDP Alliance solution set will assist in the rapid evolution from network focused operator to retail/wholesale focused service provider.

The SDP Alliance has introduced a new concept in SDP delivery. Several industry proven, best-of-breed ISVs including Aepona, Openet, Mobile Aware, Xiam, Mobile Cohesion, Changing Worlds and Cibenix have developed a more effective mechanism for SDP construction. This approach based on product components that are pre-integrated with internal and external enablers has far reaching benefits over many traditional techniques for SDP deployment. It changes the economics of SDP implementation by considerably reducing integration and operational costs. It insulates operators and SIs from the many risks associated with such large scale integration undertakings. The approach has been inspired by the many platform implementation failures witnessed in the industry over the past ten years. The Alliance members, all market leaders in their given fields, have joined forces to build a pre-integrated SDP package that eliminates traditional costs and risks.

The SDP Alliance solution intelligently connects operators with subscribers and partners to enable the creation of an ecosystem that allows service and revenue propagation.

INTRODUCTION

Vendors are exploiting the global operator requirement to create and grow new revenue streams in their business. However, a new vendor approach is required to fully exploit the opportunity. The market is experiencing significant change. Operators are becoming ever more diligent in relation to capital and operational expenditure. There are several factors influencing operators more prudent approach, not least mobile penetration rates in excess of 100% in some countries and increasing competition from Internet players. The result is that operators are not as flamboyant as in the past. They are demanding new guarantees from vendors in relation to project risks, time-to-service and operational costs for purchased solutions. The majority of operators are now focusing on service deployment as a mechanism to achieve ROI on significant network investments and to create new revenue channels. To meet this demand, vendors are creating a series of service enabling and operational cost efficiency focused offerings. The past three years have seen the emergence of IP Multimedia Subsystem (IMS), Service Capability Interaction Manager (SCIM), Virtual PBX, Service Execution Environments and a plethora of other new service enabling solutions.

The introduction of these capabilities into the operator environment is indicative of a paradigm shift throughout the industry, as operators evolve into all IP based service providers and, consequently, into retailers and wholesalers. This recognised evolution amongst operators and vendors has resulted in the emergence of the Service Delivery Platform (SDP)[1]. The term encapsulates any element of the operator environment that provides a service delivery capability e.g. a content management and distribution platform constitutes an enabler within the SDP. There is no minimum or maximum classification of what constitutes an SDP, in fact there is no agreed standard based definition of an SDP. Irrespective of its origins, the term has become a marketing instrument used by vendors to classify their offerings and to stimulate operator interest. There are currently few vendors in the market that do not boast an SDP or elements thereof. Operators require service enabling solutions and SDP can fulfil that need.

The Yankee Group predicts that the total global hardware, software and services investments for SDP technology will reach 8.8 billion dollars over the next three years. Hence, the entrance of vendors including Ericsson, Oracle, Telcordia, IBM, Open Cloud, HP and Microsoft into the SDP market. They provide operators with a considerable assortment of full and partial SDP solutions upon which to build out their service growth strategies. The adoption and integration of an SDP solution is a non-trivial task that carries enormous risk. Previous platform implementation disasters in the industry are testament to this. SDP integrates with/impacts upon all elements of the operator's existing network and OSS/BSS. The

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[1] For a detailed explanation of SDP - see associated white paper Service Delivery Platform for End-to-End Value Web Enablement available from www.thesdpalliance.com

integration of many enablers to construct the SDP itself, further personifies the associated risks. Operators must therefore select SDP solutions with proven pre-integration and flexibility, built on best of breed technology that result in faster time-to-service and reduced capital/operational expenditure. Operators must roll out SDP infrastructure and deploy services rapidly using out-of-the-box solutions with ready-to-go services. This is key to demonstrating rapid ROI and is necessary to avoid further decline in revenues and profits. This paper highlights a new vendor approach based on pre-integration activities amongst best-of-breed providers that help guarantee ROI on SDPs for end-to-end value web enablement.

WHAT DOES SDP DO FOR OPERATORS?

In simple and traditional terms operators require solutions that enable them to sell and deliver more services to subscribers. These services include content, information, communication, infotainment etc. This ever growing range of services requires that operators evolve from telecommunications providers into retailers/wholesalers selling a wide range of products to a myriad of customers. SDP adoption is one of many required steps in this evolution. Many SDP enablers[2] provide retail functionality that is required to better identify and meet the needs of individual subscribers. These include content marketing, convergent charging, service discovery, personalisation, partner management etc.

Traditionally operators have been entirely focused on subscribers as their revenue source (ARPU). However, the operator has become a centrifugal force in the emerging service value web. This has created a clear wholesale opportunity for the rental of operator assets to third parties. Deregulation in some territories has stimulated the initial market demand in the form of wholesale leasing of operator networks to third party Virtual Network Operators (VNOs). The operator has many other valuable assets that can be sold to third parties (not least, access to their subscribers).

Operators are continually propositioned by independent service providers that have a desire to construct and deliver independent services using operator resources. The SDP enables the operator to create a lucrative ecosystem for independent service providers to build, market and deliver services within, or external to the operator subscriber base. This enables the operator to wholesale excess capacity in billing systems, location engines, CRM systems, network resources, content management, user profiling systems etc. to generate new revenue channels. This is not an entirely new concept but an inability to scale has severely restricted growth.

SDP removes restrictions by introducing enablers that open up operators' systems to third parties, while also providing enablers that automate the management of them. For an independent third party to gain access requires an investment on their part and from the operator. The operator is required to create an explicit connection point, billing arrangements have to be put in place, corresponding and related policies/profiles have to be created at various points in the BSS/OSS etc. With SDP enabled on-demand, automatic provisioning and billing of web services for third parties, the operators ecosystem of third party access can scale to tens of thousands of external interactions without sacrificing security or scalability.

Clearly operators must harness the SDP opportunity to evolve and achieve revenue growth and revenue channel diversification,

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[2] For a full description of enablers see associated white paper – Service Delivery Platform for End-to-End Value Web Enablement available from www.thesdpalliance.com

through retail and wholesale opportunities. They must identify the assets that differentiate them from competing service providers and build SDPs that leverage same. The most desirable outcome is that operators will have the ability to collaborate with third party providers and collectively deliver subscribers with truly compelling and profitable service offerings. The SDP Alliance provides the necessary SDP infrastructure that allows the operator to exploit these assets to meet impending needs and build sustainable competitive advantage. It allows them to achieve rapid service execution time and maintain first mover benefits. It offers them the ability to select pre-integrated solutions built on demonstrated technologies and solutions with proven scalability and performance, to significantly reduce project risk. The SDP also addresses many other emerging requirements including seamless support for new services, conversion of existing assets with significant operating costs into revenue generating enablers, lower cost of integration with legacy systems etc.

Critically, operators must continue to defend their single biggest asset – the relationship with the customer. To achieve this, the operator must continue to win subscriber trust by delivering tailored services to subscribers that they can easily use, when and where they need them. By leveraging their SDP to support third party providers, operators have the opportunity to finally become the one-stop-shop for services. The SDP facilitates the operator in embracing unlimited amounts of services and automatically matching them to user needs.

Operators therefore have an inherent set of requirements in relation to how their SDPs are constructed and maintained. They seek rapidly deployable out-of-the-box SDP solutions with ready to go services that support faster time to market. They also demand these solutions to be constructed from tried and tested components from category leaders that have been proven in multiple deployments. They require ultimate plug and play architectures to be able to 'drop' different enablers in and out of their dynamic SDP. Due to the many facets of the SDP and their existing environments there is also a requirement for the SDP to interoperate with internal and external systems under best practice business processes. The SDP Alliance offering fulfils all of these requirements and is therefore a compelling SDP option for operators and SIs.

A SAMPLE SDP BENEFIT: SERVICE DISCOVERY AND CONSUMPTION

In attempting to drive uptake of mobile data content and services, operators have made significant investment in three main areas. They have negotiated commercial partnerships with best-of-breed service and content providers, they have assembled state-of-the-art service delivery infrastructures, and they have spent heavily on multi-channel marketing of their service portfolios.

However, this investment has seen disappointing return to date. The majority of subscribers never access services, and so contribute nothing to data ARPU. More depressingly for operators, those subscribers that regularly go online account for only 5-10% of the total subscriber base across Europe for example. These are worrying statistics for operators looking for new revenue drivers beyond their traditional mainstays; voice and P2P messaging traffic. The growth in both cases has slowed alarmingly in the past 18 months in more mature markets.

The root cause of this poor return on investment for operators lies with the inconsistent and non-intuitive mechanisms typically presented to subscribers when attempting to discover, access, purchase and consume services. Operators are missing the vital link in the delivery value chain; the ability to intelligently bring personalised service offerings direct to the subscriber's device, thus reducing (or eliminating completely) the need to 'spontaneously' browse their online portals. Several SDP enablers are required to bridge this link; content management, personalisation, device dependant rendering, on device portals, advertising, content marketing and partner management. These provide the operator with a comprehensive set of retail capabilities required to deliver tailored services to individual subscribers.

The ability to deliver a personalised shop window of services from many third party providers directly to the subscriber's device, making these services more visible to and more accessible by the subscriber, is a must have capability for operators. It has been proven to be a key driver of data ARPU uplift, both in terms of driving more subscribers online, and in new service subscriptions. The SDP Alliance offering fulfils all of these needs along with many others in relation to network abstraction, convergent charging etc.

WHAT DOES SDP DO FOR SUBSCRIBERS?

Traditionally, the vast majority of convergent and mobile operators have been focused on the network and associated technologies and have ignored their key asset - the customer. There has been an engineering-driven "build it and they will come" approach that often puts technology and product ahead of customer and marketing. But the introduction of SDP and the shift from operator to retailer/wholesaler requires a much more sophisticated understanding of customers/partners and their behaviour, in order to effectively deliver services and much needed revenue growth.

The handset is a highly personal device, only occasionally shared with friends or family. Hence, the content and services (which are costing carriers billions of dollars to deliver) require niche marketing and personalisation to meet subscriber needs. However, operators and service providers generally have a poor understanding of what their subscribers want and how to sell it to them. Operators do not lack data. The lifeblood of their business is data, from billing and provisioning to CRM. Most operators are in the early phases of learning about, or performing useful analyses on data to generate customer and business intelligence. Capturing this basic knowledge about customer activity and feeding it into other service enablers and customer care channels must be practiced consistently and universally by using the SDP.

Part of the reason operators have not been able to leverage their data is a basic lack of enablers to capture and interpret usage data from customer interaction data points and from other enablers. This is further compounded by the fact that any data traditionally captured has not been made available to other systems (enablers) that could also interpret and exploit it.

Mobile operators often take notice of specific industry trends and attempt to jump on related bandwagons, but generally get it wrong because they do not understand the subscriber needs for those services. Take, for example, Verizon Wireless' exploits with the Chocolate device (a mobile phone and an MP3 player). They failed to realise that subscribers have an inherent need to easily put their own music on the Chocolate device, even though it made it easier to buy music from the Verizon Wireless music site. To presume that people would buy a music player and not be able to listen to their existing library, is quite an oversight. Once again the operator was focused on the network (data usage) not on the service (music) or the subscriber.

With digital content, there is an opportunity to sell any product or any service, because there is someone out there who will buy it. In the Internet world there are many companies enabling subscribers to find niche products (e.g. iTunes, YouTube, MySpace). The assumption is that people are willing to pay for what is harder to find, or "less popular". The more rare or unusual the content, the higher the premium people will pay. The need for niche content is personified in the mobile environment. Content and applications that

subscribers desire on their mobile must be in a compelling impulse niche, otherwise, it could wait until they get back to their PC and fixed broadband connection. This "Long Tail" concept requires that the cost of integration and provisioning of new services that leverage unique network assets should be close to zero. This allows services to only require a few hits to be profitable. For that reason, partner relationship management and automation between operators and third parties involved in digital content is a critical part of the SDP.

The SDP allows third party service providers (experts) to access networks and subscribers to do what they do best – deliver compelling services. Asking operators to change the fundamental models and economics of their business might be a challenge, but the reality is that other retail models that utilise both customer and market knowledge need to be considered in the SDP enabled, service oriented network. Operators need to become smarter and appear more customer-savvy and the SDP has many enablers to support this activity.

TRADITONAL SDP CONSTRUCTION

Operators have surmounted many challenges to deliver what subscribers currently recognise as fixed line and mobile operator networks and services. The initial challenge was to construct network nodes, backbones and to build in service enabling intelligence. The next phase included a proliferation of operation and business support systems. Today's challenge is to overlay and integrate with all these elements to facilitate the propagation of many different types of services. Many vendors have adopted traditional telecoms approaches to construct SDP solutions, while others are successfully introducing new mechanisms.

Information Technology (IT) vendors including Sun, IBM, Oracle and Microsoft are extending their enterprise application platforms (.NET and J2EE servers) with telecom capabilities. In many cases these offerings are bundled with network abstraction layer components provided by Independent Software Vendors (ISVs) e.g. Aepona, jNETx, Bridgewater Systems etc. These platforms provide a core element of the service enabling environment as they are the required containers for the SDP enabler application software.

Network Equipment Providers (NEPs) including Nokia, Ericsson, Alcatel, HP, etc. are extending their IN and next generation platforms with SDP functionality using either enterprise application platforms provided by IT vendors or telecoms optimised application platforms provided by ISVs. This SDP functionality is generally telecoms focused and features include charging, billing, virtual PBXs, presence engines, location engines etc.

System Integrators (SIs) including Accenture and Logica CMG are leveraging the fact that an SDP is not a single product, but rather a bundle of enablers, that require integration with each other and into the operator network and IT infrastructure. Their offerings are usually composed of enablers from different industry vendors and require tremendous customisation/integration effort and carry the many associated risks.

ISVs including jNETx, Appium, Open Cloud, Redknee, etc. are leveraging operator confusion, to enter the new market space. Some ISVs have an ambition to offer a "complete" SDP solution. To even claim this is a misinterpretation of what the SDP represents. However, they do attempt to stimulate their offering by partnering with large, established players such as NEPs, SIs, and IT Vendors to deliver more comprehensive elements of an SDP platform. This approach can often cause ISVs to significantly dilute their focus on core competencies, which results in a dilution of their best-of-breed reputation for their original offering, as they fail to maintain their high level of innovation due to repeated customised integration efforts.

A number of multinational, tier-one, convergent (BT, Verizon) and mobile operators (Vodafone, T-Mobile) are attempting to implement their own proprietary solutions using best-of-breed enablers from different vendors integrated into an SDP that meets their particular

business objectives. This approach uses elements of all other approaches mentioned above and represents major investment along with long term implementations and risk management e.g. BT's 21st Century Network.

Each of these approaches has associated risks and benefits. But in nearly every case one can reference implementation projects where each has massively failed to deliver in-line with outlined project plans. This has generally resulted in colossal costs for the operator. Increasing market pressures and stagnated revenue growth means that operators can no longer absorb these risks.

THE SDP ALLIANCE SOLUTION

The SDP Alliance has introduced a new concept in SDP delivery. Several industry proven, best-of-breed ISVs including Aepona, Openet, Mobile Aware, Xiam, Mobile Cohesion, Changing Worlds and Cibenix have developed a more effective mechanism for SDP construction. The purpose of this consortium is to pre-integrate their respective product based solutions into a cohesive, end-to-end, retail/wholesale focused, set of SDP enablers. Each of the vendor types mentioned above can take this end-to-end service enabling SDP set and deliver it as a standalone SDP solution or easily integrate it into a larger SDP implementation. This approach has far reaching benefits that are highlighted throughout this document.

The inspiration for the SDP Alliance is the result of many customised integrations that the different combinations of consortium members have found themselves engaged in, throughout the world over the past two years. The obvious next step was to engage in a complete pre-integration activity and to expose a comprehensive set of further standards based integration points to enable easy integration into operator environments and into other SDP enablers. This product based strategy is required to meet market needs for faster SDP implementations with lower integration costs and lower risk.

The pre-integration activity has been implemented by a third party SI with the support of each of the participating ISVs. The participants have a communal objective to remain focused on each of their core competencies. This has been identified as a key strategy to support the level of technological innovation and feature introduction required to retain their existing best-of-breed market status. This focused approach is also required to continue to rapidly respond to the ever evolving needs of operators. Furthermore, it delivers on the operator promise for lower integration time, removes much of the risk associated with SDP construction and significantly lowers costs associated with SDP deployment and operation.

The SDP Alliance SOA based solution set encapsulates a wide range of required enablers that support the emerging retail and wholesale operator activities. These include the following:

- Partner Management enables operators to make new cutting edge content and services available to subscribers, by allowing content and service partners to manage their own service lifecycle through a high level of Business Process Automation (BPA) within the IT and network environment.
- Personalisation enables operators to monitor user activity, construct rich user profiles and actively personalise access portals for individual users by dynamically adapting menus and navigation in response to the needs and preferences of each unique subscriber.
- Content Management enables support for sourcing, storage, processing, subscription, scheduling, streaming and delivery of content and services in collaboration with other SDP enablers.

- Network Abstraction enables operators to streamline the process of developing new services and applications by opening up the network and associated resources to a wider pool of application developers with little or no specialist telecommunications knowledge.
- Device Identification & Rendering enables operators to transform Web based content and business applications for optimised delivery to any device. It addresses the challenges of rendering all types of content and service UIs on any device by providing runtime device detection, identification and content transformation.
- Service Discovery enables operators to make services more visible and more accessible to their subscribers, thereby increasing the usage of these services and driving ARPU and profitability through the use of functionally rich On Device Portals
- Advertising enables operators to automate the management and delivery of targeted adverts directly to individual subscribers' handsets by delivering a capability to perform detailed profiling of individual subscribers. This is hugely valuable to all advertisers seeking new, highly targeted methods of getting their message to the right people.
- Convergent Charging enables operators to deliver any service to any type of subscriber, and to enable any kind of payment to be collected or authorised before service delivery is actually executed. This is required to facilitate real time access control, rating, authorisation, charging, billing and payment.
- Content Marketing enables operators to support a rich content vending environment that communicates to individual subscribers by providing subscriber profiling, campaign management and fulfilment and recommendation capabilities.

The SDP Alliance is partnering with SIs throughout the world to enable them to deliver a better value, lower risk solution and to become the single point of integration and support to operators. The SDP Alliance approach changes the economics of SDP implementation for these SIs. It enables them to offer an end-to-end SDP solution without having to invest in any of the traditional integration activities required across the individual enablers offered by seven different vendors. This is all delivered for free, and significantly reduces the risks and costs customarily associated with such a large integration activity. Hence, these SIs have considerable advantages over many of the other vendors identified above. They can confidently deliver solutions to operators faster and at lower cost. This creates a very rewarding environment for all stakeholders. The SDP Alliance partners achieve product sales. The SIs have a clearly differentiated market offering that results in increased profit due to lower integration anomalies and duration. Operators get a retail/wholesale focused SDP including proven best-of-breed components implemented rapidly and cost effectively.

CONCLUSION

The SDP Alliance is a collection of market leading companies with proven revenue generating implementations throughout the world. The Alliance members have successfully deployed systems in operators including Vodafone, China Mobile, Orange, O2, BT, Verizon, OTE, Telenor, Telstra, Hutchison Whampoa etc. Their partners include HP, IBM, Nokia, Oracle, BEA, Sony Ericsson, Symbian, Accenture, Atos Origin, Logica CMG etc.

By leveraging their collective experiences, the SDP Alliance has clearly recognised the challenges facing operators and the vendors supplying operators with SDP solutions. The seven Alliance partners (Xiam, Mobile Aware, Openet, Mobile Cohesion, Aepona, Cibenix and Changing Worlds) have combined their knowledge and systems to create a pre-integrated, de-risked SDP solution. The SDP Alliance offering provides SIs and operators with a set of SDP enablers that facilitates operators in generating new revenues by more effectively selling their services to partners and subscribers. Furthermore, it allows operators to rapidly deploy SDP and roll out new services under limited operational costs and very limited integration risk.

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