Chapter 1.4
Concepts and Dynamics of the Application Service Provider Industry

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INTRODUCTION: SOFTWARE AS A SERVICE

The enterprise intelligence through e-transformation is one of the cornerstones of the next-generation e-business era where the Internet constitutes the core business resource. Furthermore, the severe competitive landscape of e-business makes firms focus on their core capability and farm out staffing functions such as IT. Under this circumstance, enhancing intelligence and synergy through e-transformation will be accomplished by IT outsourcing via ASPs (application service providers). The ASP industry now provides an essential infrastructure for the Internet-based e-business transactions, thereby accelerating corporate e-transformation.

An ASP is generally defined as a third-party service firm that deploys, manages, and/or remotely hosts a software application through centrally located servers in a lease agreement. ASPs started their business by providing online application programs such as ERP (enterprise resource planning) and CRM (customer relationship management) solution packages to corporate customers. The first customers were small companies or local branches of multinational companies where IT outsourcing was the only option to deploy IT resources due to financial or regional constraints. As seen in these cases, the biggest merit of employing ASPs is that corporate customers do not have to own the applications and take responsibilities associated with initial and ongoing support and maintenance. Consequently, ASPs are differentiated from the existing IT services in that ASPs provide IT resources to multiple corporate clients on a one-to-many basis with a standardized service architecture and pricing scheme.

BACKGROUND: INDUSTRY VALUE CHAIN

The industry value chain does not allow a single service provider to control the entire service delivery process. Even if we confine our attention to the software delivery process in the value chain, the complexity does not reduce significantly. In order to deliver applications over the Internet, we need a mechanism to establish and maintain collaboration

DOI: 10.4018/978-1-60566-026-4.ch110

among independent functional divisions. Analysis of this nature of the value chain shows how the industry is likely to evolve and gives some insights into the strategic meaning of special types of convergence. In particular, we should point out two critical aspects of the value chain, which are required to survive in the market: a large customer base and stable relationship with other functional divisions. The structure of partnership among the players in the value chain is one of the major elements to classify emerging ASP business models. Figure 1 summarizes key players in the ASP value chain. (Figure 2)

There are a number of factors that are frequently cited as fueling or dashing the growth of the ASP market (Burris, 2001; Factor, 2002; Kim, 2002; Sparrow, 2003; Toigo, 2001). One of the striking characteristics observed so far is that immaturity of the industry is the most representative challenge in terms of the market factor: for example, the uncertainty as to whether existing and emerging ASPs are winning enough customers to validate an ASP business model for highly sophisticated enterprise applications. While some ASPs are gaining momentum with early adopters, there are many client companies that are unwilling to rent ERP applications due to the lack of trust in the industry itself in Korea (Kim & Choi, 2001). Moreover, it is security control and remote monitoring systems, SLA (service level agreement; Lee & Ben-Natan, 2002; Sturm, Morris, & Jander, 2000) management, and the global standardization process that should be further developed to support proliferation of ASPs. In the end will survive only a few successful ASPs that adapt themselves to the market requirements and take the most advantage of the competitive landscape.

ASP BUSINESS MODELS

The industry's short history raises the following questions. What changes will happen? Who will be the winners and losers? To answer these questions, Figure 3 clarifies different types of the ASP business domains that are currently emerging. ASP's common value proposition to improve total benefits from IT outsourcing has been giving rise to various trials in designing the service delivery processes, each of which corresponds to a busi-

Figure 1. Key players in the ASP value chain model

- Software Vendors: including ISVs (independent software vendors), content providers (CPs), and so forth
- Network Infrastructure Providers: including telecommunication operators, ISPs (Internet service providers), and so forth
- Application Service Providers: as an intermediary or an organizer between software vendors and customers
- Individual and Corporate Customers: subscribers (end users) of the ASP services

Figure 2. Drivers and challenges of the ASP industry

Category	Drivers	Challenges
Technology	◆ Reduce risk of technological obsolescence due to rapidly changing IT ◆ Provide a chance to utilize best-of-breed applications ◆ Avoid IT staffing shortage	◆ Unsolved security concerns ◆ Emerging, new technological requirements from the clients: e.g., SLA with client participation ◆ Unproved service reliability: e.g., network problems, system scalability and performance
Market	◆ Minimize up-front TCO (total cost ownership) ◆ Provide predictable cash flows	◆ Unproved client momentum ◆ Failure in giving clients sufficient trust due to unstable ASP industry