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RESTAURANT ASP POS APPLICATIONS

ASP *n.* (ā-s-p)

Renting programs that run over the Web vs. purchasing software. In general, as ASP develops software and rents it to another ASP or an end user. Similar to an ISP that owns Web and e-mail servers to host pages and distribute messages, ASP providers support servers that host applications and related data.

Point-of-sale (POS) hardware, software, Net ware, training and technical support are fundamental business tools with relatively short life cycles. Given the escalating cost of purchasing and maintaining specialty applications, hiring and retaining qualified staff and obtaining and configuring robust POS systems, some foodservice operators are investigating alternative system architecture and infrastructure in the form of application service provider (ASP) POS. The ASP model allows restaurant management to share initial capital outlay, application software and ongoing technical expertise with an application supplier. Despite the majority of system implementations remaining traditional in-store, client-server architectures, some innovative restaurant companies are pursuing Internet-hosted POS applications.

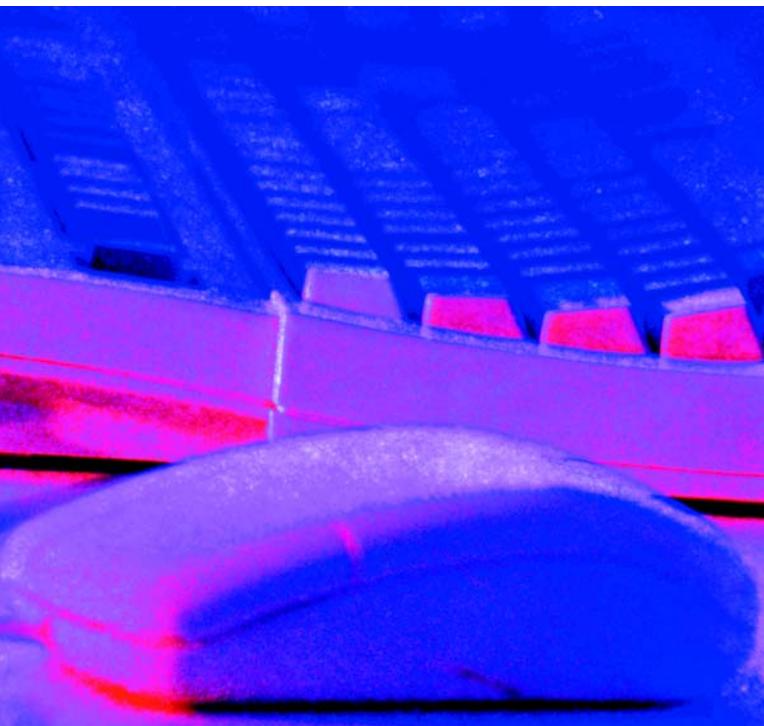
Historically, the restaurant industry has primarily used outside data processing services for payroll processing. Despite comprehensive in-house applications, it is not unusual for a restaurant to export time and attendance data to a service bureau for processing and production of payroll checks and a payroll register. More recently, some eateries have turned to Internet companies to manage online reservations and gift certificate sales. Outside data processing companies have evolved from service bu-

reau service providers or ASPs. The evolution from service bureau to outsourcing to application service provider really brings restaurant technology full circle.

External data processing companies, once referred to as service bureaus, have evolved into sophisticated electronic data processing (EDP) centers capable of hosting a more diverse and complex set of user applications. In many ways ASPs are an enhanced throwback to the timesharing services of the past. The timeshare concept was simple; a restaurant rented a terminal and modem, dialed up its timesharing company's computer, used its application software and paid a transaction fee. Even though many foodservice practitioners have become comfortable with on-premises computing, there appears to be a renewed interest in returning to centralized data processing for certain applications. Some restaurateurs cite the lack of in-house technology talent, aging legacy systems or scarce resource funding as reasons motivating interest into the remote processing capabilities of the ASP model.

The term ASP was coined in 1997 and now boasts more than 1,000 suppliers with offerings for nearly every industry, including the restaurant industry. Forrester Research projects worldwide ASP sales to exceed \$22 billion by the end of 2004, while the Gartner Group estimates 25 percent of all small and midsize businesses will employ an application service provider to support some aspect of business operations by 2006. The ASP model, akin to predecessor outsourcing schemes, treats software as a service thereby transferring responsibility for operational availability and maintenance from the user site to a remote ASP site.

In general, an application service provider develops software and rents it to an end user. Application service providers are third-party agencies that manage and distribute Internet-based software services and solutions to clients from a central data center. An ASP contracts activities and expertise aimed at managing information technology for a predetermined level of expenditure. ASPs supply software and software-related services over the Internet (or via a virtual private network or VPN) on a fee basis. The ASP model is a server-centric scheme in which remotely hosted applications are provided via a secure data exchange channel. ASP decisions, which tend to be based on economic factors, are driven largely by frequency of use, processing costs, staffing requirements, on-going maintenance and enhancement expenses, representing a return to some of the computer processing modes of the past.



Common ASP features include:

- Application software – software owned and operated by ASP
- Application server – hardware platform owned and operated by ASP
- Application accessibility – browser/thin client over Internet from ASP
- Application payments – per-use or fixed fees levied by ASP
- Support staff – employees are trained and responsible to the ASP

Proponents of the ASP model argue that it places technical system components at a secure site with highly qualified system personnel and leaves property management to concentrate on operations and customer service. The ASP is expected to employ state-of-the-art applications while the restaurant strives to comfort its guests and reward staff. ASPs argue that not only are superior information system services available but they are also attained at a reduced level of expenditure.

The advantages of an ASP include low cost of entry, minimal setup procedures, incremental payments based on frequency of use, reduced in-house technology staff, elimination of on-premise technology infrastructure and ASP bandwidth that may be superior to individual user Internet capability. ASPs control remote servers that house applications and related data. To gain the benefit of an application, the user needs to have an Internet connection to establish access and a Web browser to manage files.

ASP Model

Centralize, outsource and rent. This is the traditional notion of the application service provider model. Others describe it as the technology model that is always at the mercy of the Internet. Additional concerns are the degree of data redundancy, especially at the time of high-volume peak periods.

The ASP concept is simple and straightforward. Instead of purchasing an expensive software application or complex information system, that may cost thousands of dollars, an ASP provider offers the opportunity to rent applications or systems across the Internet. In exchange for usage the user pays the ASP a fee (usually monthly) and assigns system control over to the ASP. This arrangement is similar to an athletic club that offers a weight training facility. Participants do not need to

pay for each piece of equipment used, but pay a membership fee and gain access to the weight room and other locations. Since the ASP controls the applications it supplies, often training at the property-level may not be required.

An application service provider is an entity designed to sell and distribute software and software services to disparate computing users. An ASP can dramatically reduce the costs of such software and software services. The concept of an ASP is akin to many other conveniences with which we come in regular contact including the telephone and air travel. Instead of building and supporting a complex communication system, a user merely buys an affordable telephone and then purchases phone units (access and cost-per-minute charges). The cost and complexity of owning and operating a fiber optic network is prohibitively high, but paying the cost of a single phone call across a large-scale system can be shared feasibly among all users.

Similarly, few people fly often enough to cost-justify the purchase of a personal aircraft. Therefore, when traveling by plane, more travelers simply purchase a ticket to rent a seat for transportation. The cost of an airplane is so high that compared to the cost of an individual trip ticket, ownership makes no economic sense. Obviously, the cost of a ticket represents a shared contribution for pilot services, maintenance, fuel and related expenses involved in operating an airline company. Paying a low incremental price for each use is the basic underpinning of the ASP concept. The reasonableness of an application service provider hinges on two critical factors, frequency of use and cost of entry and maintenance. The objective of an ASP is to enable management to focus on customer service, not technology infrastructure.

ASP Advantages

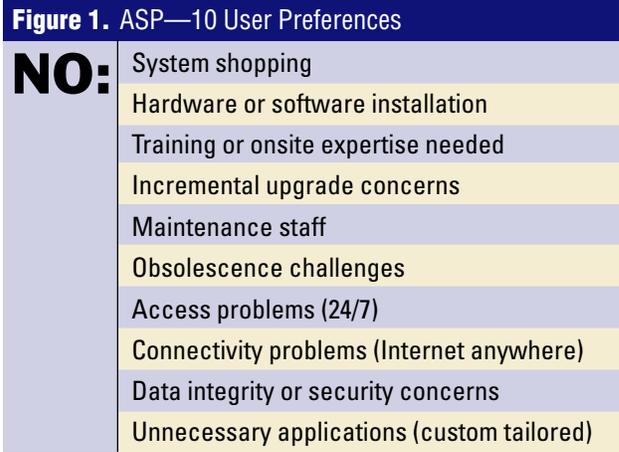
The ASP model permits a user to lease an application for a monthly fee, via the Internet, without having to build the technological infrastructure to support the applications in-house. Renting programs that run

over the Net can have many advantages, but foremost is convenience. There is no need to shop, purchase, train, install or acquire additional hardware and software components. Installation hassles, incremental upgrades and ongoing maintenance issues become someone else's concern. The user typically pays a nominal monthly fee for use of necessary applications or parts of applications. Hence, another appeal of the ASP model is customization. From a user perspective the ASP model presents 10 promises in Figure 1.

In general, an ASP develops software and rents it to another ASP or to an end user. Similar to an ISP that owns Web and e-mail servers to host Web pages and distribute messages, ASP providers support servers that host applications and related data. A user simply connects to the Web and accesses the applications and protected and restricted data files. Overall, the most popular ASP applications to date are workforce training, customer relationship management, accounting and purchasing functions, financial packages and human resources software. Given these promises the ASP model has been described as a one contact (system supplier), one contract (service-level agreement) arrangement.

ASP Fee Structure

The convergence of two previously separate service provider industries: Internet service providers (ISPs) and providers of information technology services (ITSS) have collaborated to produce application service provider (ASP) solutions for the restaurant industry. Restaurants that choose not to invest in a comprehensive in-house information system installation, or which lack the technical personnel to maintain it, can



employ ASP application processing and related services on a pay-per-use basis or under the auspices of an annual license. Some ASP fee plans are computed as a hardware rental fee, flat monthly fee, per-application use fee or a combined plan with specified minimum billings and maximum charges. Important considerations of the ASP model are its revenue algorithm and the appropriateness of a service-level agreement.

Service-Level Agreement

Typically, an ASP guarantees application availability, data security, backup protection and disaster recovery procedures through a mutually agreed upon contract termed a service level, or service license, agreement (SLA). The SLA may define the working relationship of the contracted parties, scope of hosted services and an acceptable level of customer service response/resolution time. Communication among the parties is important so that each understands the other's business and role. Since an ASP is capable of serving an array of proprietary customers simultaneously, the SLA provides assurances to each participating user. Normally, the ASP provides necessary application software licenses, implementation, training, management and user support and charges an initiation (setup) fee, monthly fee and SLA fee. An SLA fee is designed to cover:

- ◆ availability of application software (uptime)
- ◆ supportive services for application software (maintenance)
- ◆ performance standards for application software (enhancements)
- ◆ cost of product license (as appropriate)
- ◆ policies governing renewal of SLA fees

ASP Connectivity

Basically, restaurants have two ASP connectivity options. One option involves the restaurant accessing the ASP over the Internet; commonly termed a hosted ASP. Alternatively, those same applications could be similarly built on Web technology but accessed more

securely through a virtual private network; often labeled a VPN ASP. The VPN configuration involves creation of a proprietary, encrypted area on the Internet that requires heightened authorization and password verification.

ASP Concerns

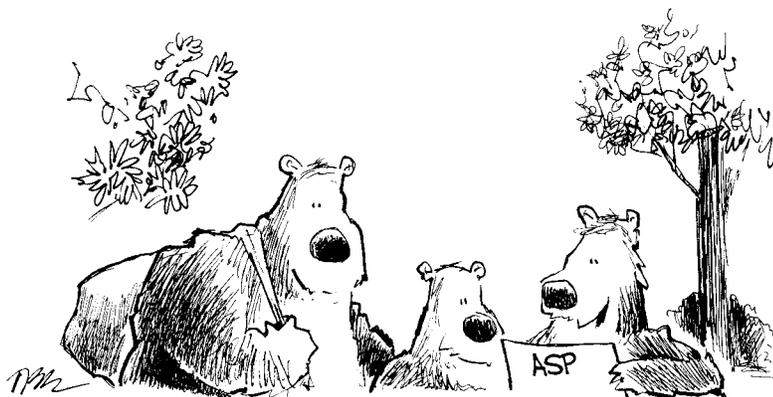
The ASP model presents management with important concerns in the areas of security and dependency. The transference of proprietary data from unit-level operations to a remote server site creates the need for firewall protection, encryption schemes and security deterrents. In addition, creating a reliance on the Internet to move mission-critical data can negatively impact operations if the network is overburdened or unavailable (i.e. single point of failure). While concerns in these areas are paramount, there are additional factors to consider:

Transmission speed—When a restaurant relies on remote real-time data processing, information transmission speed becomes a major focal point. Transmission speed standards for feasible ASP application must be greater than 1 million bits per second (1Mbps) and highly complex ASP-based solutions are likely to require in excess of 10 Mbps to function smoothly. Impediments to speed include: Internet service provider (ISP) capabilities, connectivity mode and avoidance of bottlenecking.

Data security—A rigorous security environment, featuring complex encryption encoding, is necessary for effective ASP implementation. The fact that all transmitted data is proprietary and mission-critical necessitates a disproportionate focus on data privacy and integrity.

Connectivity—Permanent, full-time connectivity is not required or desired for an ASP application, but a reliable connection is critical to effective operations. Connectivity options vary in terms of speed, reliability and expenditure.

Continuity—What happens if the link between the restaurant and the ASP provider becomes inoperable? Most ASPs claim an



“...Look at THIS, guys! A garbage can placement schedule, updated 24/7...a comprehensive nutritional analysis of picnic scraps, including low carb options for the Atkins bears...scavenging timesheets...moonlight forecasts...all on an Internet-based application with a secure remote data exchange channel. I'm really impressed...”

Figure 2. Questions to Ask an ASP

- 1 |** How and where are user applications and data stored?
Shared servers are less expensive but represent a security risk
- 2 |** What are the specifics of the ASP service license agreement?
Inclusive of maintenance, upgrades, redundancy and backups
- 3 |** What support options are available from the ASP?
Consider technical help via telephone, Web and e-mail support
- 4 |** What is needed by the user to access remotely stored user data?
Needing specialty hardware or software defeats the ASP purpose
- 5 |** Can ASP applications be integrated with other user programs?
Online applications must work with other applications
- 6 |** Accessibility of user proprietary data, by the user, at the ASP site?
Be sure files are stored in a compatible format for user access

accurate, continuous status report of current operations (especially order entry, transaction processing, open check tracking and closed checks) that is accessible locally (i.e. at the unit level). This is a requirement for a busy restaurant environment. Having an offline POS contingency plan is mandatory.

Training —While ASPs claim that no training is necessary, this often is an understatement as staff controls data entry, evaluates output and initiates system processes. Formal training may be supplemented with online help, Web-based training materials and other multi-media tools.

Interoperability —The ability to share transmitted data with other restaurant applications, either locally or remotely, is important to achieving an effective enterprise-wide system. Management must be mindful of the synergy that can be achieved through the interoperability of ASP POS-captured data and other application software, including data warehousing and data mining.

Fee structure —While fees are typically negotiated on a transactional or fixed monthly basis or combined rating scheme, the cost effectiveness of additional modular applications may be debatable. Operators need to be vigilant in application tracking, pricing plans and audit functionality.

Other Applications

In addition to ASP POS, there is an array of restaurant industry ASP applications available. Applications featuring Web-hosted software are beginning to receive attention within the restaurant industry. While independently operated restaurant properties may appear more likely to consider the idea of Internet-hosted applications, it is often multi-unit, chain operators who become early adopters. Given the synergistic benefits that can arise when aggregating multiple store

data, chain operators are more likely to appreciate the advantages of a centralized data storage. For example, hosting a data warehouse at corporate and then distributing to regional operational managers for in-depth analysis is an advantage. In general, franchise operators have not been as quick to adopt ASP applications.

Restaurant ASP module application software may include: data warehousing and data mining, Intranet hosting, online dining reservations (CRS), human resources management, food and beverage management, customer relationship management, accounting and financial and related areas (e.g. inventory management programs, labor scheduling, fixed asset analysis, menu engineering and forecast management).

Basically, a restaurant ASP solution utilizes a Web browser installed on a property-level PC to access (via an Internet connection) property management system modules residing on a remote server. The ASP model relieves restaurateurs from having to invest in up-front hardware, software and training costs as well as the ongoing support costs associated with technological maintenance and enhancement. In addition, the ASP model offers the ability to centrally manage multiple properties, over the Internet, from anywhere (i.e. absentee or remote management).

To date, the majority of POS system implementations remain the traditional in-store, client-server architecture. Foodservice operators, however, are beginning to adopt online applications, including ASP POS. ASPs have considerable investment in skilled and certified staff, well-structured data centers, powerful file servers, interconnected hardware devices and integrated software applications. As restaurant companies forge ASP POS alliances in support of enterprise-grade information technology solutions, they find they may be better able to focus on core business operations, as opposed to technology issues. In essence, guest service remains the focal point, not information handling services.

An ASP POS application involves a remote data center with host software on a POS server that sells POS applications to the restaurant industry. Users access applications via the Internet, or a VPN, and are relieved from having to invest in the total cost of hardware and software and related expenditures. In addition, the ASP model enables management to operate multiple locations from a remote or company-owned central server site. Users can determine a unique application configuration and lease only desired components. It is for these reasons that the ASP model is often described as a custom-tailored configuration. By relying on a third-party for service applications, the restaurant avoids potential installation pitfalls, annoying incremental upgrades and ongoing maintenance. These issues simply become someone else's problem. Based on current ASP fee structures, a point-of-sale application may be defensible and cost justifiable. Given the issues of security and dependency related to remote data processing, the ASP POS vendor should provide an offline contingency plan that allows for uninterrupted POS operation until network connectivity can be restored. Restaurant management is encouraged to consider an ASP POS solution.

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