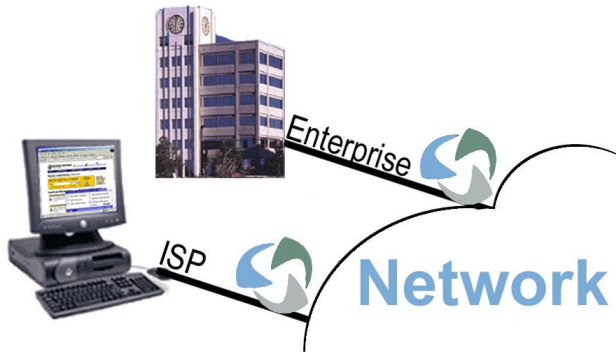
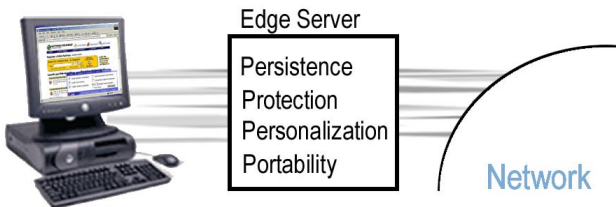




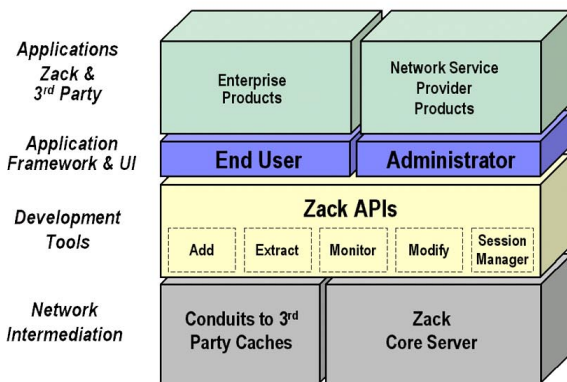
# Building a Smarter Internet



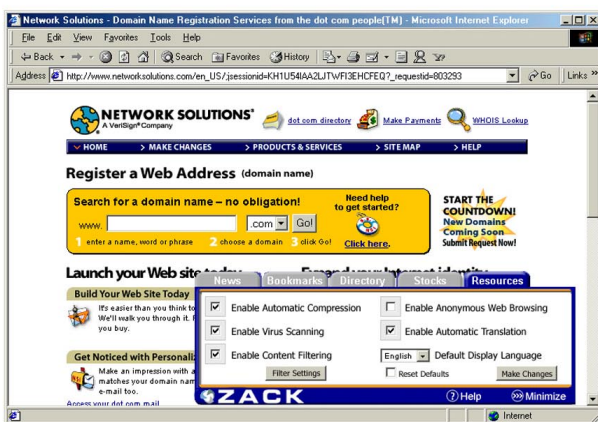
Zack adds value at the edge of the network.



Monitors and modifies any network traffic.



Provides an open platform with a full suite of applications.



Delivers user benefits without client software.

Zack enables any ISP or enterprise to harness the power of the edge of their network to drive a more profitable, productive and persistent relationship with their subscribers and employees. Zack's patent-pending edge platform sits between the Internet and end users enabling real time Web page monitoring and modification. This position at the network edge gives Zack the unique ability to deliver timely and targeted information and provide value-added services with no client-side download required.

## Network Service Providers

End users have traditionally identified the Internet with portals and destination sites, not with their Network Service Provider. However, NSPs possess two unique and valuable assets that they have yet to leverage. They have a billing relationship with the subscriber — allowing the NSP to easily capitalize on initiatives to enhance revenue. They also control the edge of the network — giving them the last opportunity to affect the Web experience of the end user. Zack's NSP product suite capitalizes on these two assets to create new revenue streams and more profitable subscriber relationships for the service provider. It allows the NSP to move beyond providing just access to building a value-added relationship with the subscriber.

## Enterprises

The Internet presents significant challenges and opportunities for today's enterprise. Recent studies have found that nearly 50% of Internet use at work is personal in nature, which wastes an average of 1.5 hours per employee per week. The challenge is how to minimize this abuse. Enterprises also continually struggle to disseminate critical information to employees on an efficient, timely and easily accessible basis. Intranets and e-mail can never ensure easy and timely access. Zack's enterprise suite affords the company protection and control over the Internet while also opening up the Web as a delivery vehicle for critical employee information and services.

## The Zack Edge Application Server

Zack has developed the first comprehensive edge application server designed as a platform for a complete suite of edge services. The power of this unique platform is the result of four attributes. These are:

- A highly scalable, high performance proxy engine
- The capabilities to add, extract, monitor or modify information from content streams in real-time, on a user specific basis, without any perceptible latency
- A persistent user interface and communication channel that requires no client-side software
- A comprehensive set of APIs that enables Zack or third-party developers to write edge applications

Today, Zack is alone in providing a comprehensive edge services platform and has created six targeted products on top of the Zack Edge Application Server to address the needs of the NSP and enterprise. Detailed descriptions for each product can be found on the back of this page.



# Zack Edge Application Servers Make the Internet Smarter

## Management:

Dave Weinstein  
*President and CEO*  
Phone.com; Jetstream; Centigram

Matt Patterson  
*Founder and Chairman*  
Excite; Stanford

Jason Campbell  
*Chief Technology Officer*  
Strategic Economic Decisions;  
Netference

Christian Wiedmann  
*VP Engineering*  
SunGard; Dow Jones/Telerate  
Systems

Dave Lynch  
*VP Finance & Strategic Alliances*  
PricewaterhouseCoopers; Wells  
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Sam Aloni  
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Brad Witteman  
*Director of Marketing*  
Phone.com; Challenger; Sony

Dana Farber  
*Director of Human Resources*  
Starwood Financial; Coopers &  
Lybrand

**Industry Category:**  
Edge Application Servers

**Intellectual Property:**  
Zack Edge Application Server:  
Patent Dockets: 09/513,217  
09/512,974; 09/512,975  
09/512,976; 09/512,977

**Founded:**  
March 1999

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## Network Service Provider Solutions

### Edge Identity Server

**Challenge:** Differentiate service and reduce churn.

**Solution:** The Zack Edge Identity Server enables NSPs to brand each Web page their subscribers view — including branding with animated, rotating and seasonal logos. Persistent branding keeps users from associating their Internet experience with the destination site rather than the provider of their Internet connectivity. NSPs can extend the reach of their core applications by adding persistent navigation elements for e-mail, home page, etc., reinforcing the value of these applications. NSPs also need a communications channel with their subscribers to introduce new services, promote existing services and provide account updates. They can accomplish this by greeting the subscribers with a welcome screen (pop-up or hovering) that contains content the NSP controls, and with a persistent messaging channel to each subscriber for service level announcements or billing alerts.

### Ad Insertion Server

**Challenge:** Increase third-party revenue per subscriber.

**Solution:** For the most part, NSPs have not successfully capitalized on revenue streams around their subscriber relationships. The advertising that NSPs have conducted to date has been on their own portal Web page or via in-bill inserts. NSPs can generate a significant new revenue stream with additional advertising inventory by including pop-up ads and hovering billboards in their user experience. These aren't just every day banner ads; their relevance to the subscriber can be enhanced by targeting the ads based on geography, time, user profile, click stream, URL and content context. NSPs can also leverage existing affiliate programs for additional revenue by helping other companies sell everything from books to computers with the Zack Ad Insertion Server.

### Edge Services Platform

**Challenge:** Increase direct revenue per subscriber.

**Solution:** To maximize subscriber revenue, NSPs need to offer multiple tiers of service and expand their portfolio of enhanced services. Zack provides the solution to both with its Edge Services Platform. This platform enables the NSP to create multiple service tiers differentiated by range of Internet access, advertising content and enhanced service availability. This allows the NSP to balance the feature needs and price sensitivity for each customer segment. This platform also enables the NSP to market several enhanced services suites including: *Protection* (Anonymizer, Virus Scanning, Content Filtering, Spam Blocking); *Community* (Shared Browsing, Shared Bookmarks, Server-side Bookmarks); *Shopping* (Wish list / Watch list, Price Compare, Product / Site Reviews, Auction Watch); and *Language* (Translation, Language Dictionaries, Language Thesauri). The platform also directly markets these services to end users on a "just-in-time" basis, monitoring the content stream to find a subscriber's point of greatest need.

## Enterprise Solutions

### Enterprise Messaging Server

**Challenge:** Improve corporate messaging and increase Intranet resource use.

**Solution:** Enterprises are constantly seeking new ways to more efficiently disseminate key information and publish corporate announcements. Zack's Enterprise Messaging Server provides, in essence, a corporate bulletin board as an integral part of the employee's Web experience. The enterprise can use this 'bulletin board' to provide links to key Intranet information and resources and also to instantly communicate corporate updates to all employees via a persistent corporate Web channel. In this way, the Zack Enterprise Messaging Server can dramatically improve employee productivity and the timeliness and effectiveness of internal corporate communications.

### Access Management Server

**Challenge:** Combat employee Internet abuse.

**Solution:** Internet access extended to each employee's desk has proven to be both an invaluable information resource and a significant detriment to employee productivity. The company can regain control over this resource with the Zack Access Management Server. With this Zack server, the enterprise can decide, based on type of content, if and when to permit employee access. For example, an enterprise may permit employees to visit shopping sites but only during lunch hours and after work. The company may also decide never to permit access to pornography or other unsavory sites. Access privileges can also be differentiated by employee level or department. Profiling and reporting tools also facilitate the process of monitoring Internet usage across the company

### Enterprise Services Platform

**Challenge:** Decrease IT support costs.

**Solution:** Management and maintenance of critical PC software applications within an enterprise requires more and more resources as the number of employees grow. Companies can reduce IT support costs by moving key applications from each desktop into the network. These applications require no client-side software and can be managed centrally through a network server. Server-side application bundles available for the Enterprise Services Platform include Zack's *Protection* and *Language* suites. The *Protection* application suite enables administrator control of content filtering, prevents damaging viruses, worms and Trojan horses from even reaching the employee's computer by blocking them at the network edge, and reroutes junk mail away from the employee's e-mail address. The *Language* application bundle enables any employee to translate a document or e-mail, look up a specific word's meaning and look for synonyms independent of the language of origin.

**To experience these Zack's solutions for yourself, take the tour at [www.Zack.com](http://www.Zack.com).**