

E-Commerce Technology Briefing: Local.Net

Local.Net's technical underpinnings extend E-commerce to wider circles of business. By enabling service provisioning for classes of preferred website customers, secure transactions, and on-the-fly website creation, Local.Net's implementation answers those who wonder what's preventing their companies from doing business online.

Shop Zone

While hype about the Internet has cooled a bit in 1999 and the novelty of cyberstore purchasing has faded from the reality of its rough edges, consumers and businesses alike still recognize a good thing. While consumers don't necessarily use electronic sales outlets to get the best price, it's the convenience that so strongly appeals to PC users today. Whatever the motivation, even conservative projections put electronic purchases at the turn of the century in the billions.

For business, the Internet and e-commerce affords potentially significant reductions of a host of elements and overhead costs. Forecasts of e-commerce levels beyond the turn of the century vary widely, yet businesses willing to invest on the order of \$200 billion worldwide for e-commerce technology, according to recent International Data Corp. (IDC) reports, is one gauge of the significance of e-commerce.

IDC calls current corporate spending on net-related technology "frantic," with sales expected to hit \$85 billion in the U.S. alone in 1999. The spending frenzy

is being fueled by the widespread move toward e-commerce, and will continue "well into the new millennium," the report states.

"Corporate Internet spending is being driven by the ongoing quest to sustain competitive advantage," says Anna Giraldo, senior analyst with IDC's Internet and E-Commerce Strategies Group. "Corporations need to be innovative, efficient, and ultimately profitable in order to remain competitive, and Internet technologies enable businesses to do so."

CEOs around the world agree, according to a survey of approximately 600 CEOs from 24 countries recently conducted by Booz-Allen & Hamilton and the Economist Intelligence Unit. Ninety-two percent said the Internet will reshape the global marketplace by 2001. And yet, here is the surprising news that's so significant for Local.Net's clients: only 37 percent of the CEOs were from companies that have taken the plunge to using e-commerce. While 60 percent intend to get into the game, only 29 percent have actually done so! Let's consider what is holding back faster progress.

Problems? What Problems?

Website development can be all of these things: delay-prone, involve 3rd party developer cost, complicated. Or, using Local.Net's interactive, online development application which prompts users for information step-by-step, the website can be up and processing customer orders in just a few hours. Local.Net innovates website development that appeals to potential e-Commerce businesses. It's online development tool provides over 50 graphically designed templates that enables companies to create aesthetically appealing websites. Next, the tool prompts users for information about how the website will operate, products that will be sold, etc. With Local.Net, setting up a website couldn't be any easier.

Making e-Commerce Provisioning Truly Effective

Industry-wide spending of \$62 billion in 1998 for e-commerce technology doesn't mean that companies one-by-one will spend big bucks. Far from it. Nor will e-commerce based businesses settle for processing systems with limited functionality and capacity associated with earlier Internet shopping malls and online retail sites.

"A good way to push down cost and complexity of these sites is by using next-generation technology to regulate how the web server handles e-commerce traffic" observes Vincent Palmieri, President of Local.Net. Local.Net is using a new application from Hewlett-Packard, HP WebQoS, that enables our website hosting service (ShopZone) to incorporate several important improvements compared to existing services. For one, it prioritizes customers, making the processing of orders a priority over service to customers simply browsing a product

catalog. In addition, the system provides customers with information about how quickly their request will be completed during peak demand periods; a considerable improvement because no one likes to blindly wait for the process to finish.

Today's packet switching technology behind the Web takes a first-come, first-serve approach. Unfortunately, this does not allow companies to take the highly desirable step of prioritizing server resource usage or the requests of premier customers. Making matters worse, when a Web server is overwhelmed by requests, it becomes a bottleneck.

The key to next level of success in e-commerce is the implementation of server technology that allows established, real-world relationships to be reflected on the website, preferably in real time.

e-Commerce Success – The Sum of Its Parts

By providing differentiated services, Internet software and routing equipment can tag IP packets, allowing for enhanced levels of service. This capability is at the heart of HP's WebQoS technology, which allows HP 9000 and other servers

running HP-UX to stabilize service during periods of heavy demand, optimize use of equipment investments, prioritize customers and enable companies to deliver consistently exceptional service on the Internet.

Premium-Level Service Provisioning

A hallmark of Local.Net's provisioning is its levels of service. The company's clients can sign up for services commensurate to the resources required to support website hosting, data storage size, and data volume. Yet, at the same time, Local.Net uses WebQoS maintain the performance levels of clients' sites from each other during peak periods of data traffic on the system. Since Local.Net can partition the resources of its HP 9000 Enterprise Servers, the company avoids costly over-provisioning.

Erasing the number one frustration over websites

For users it's lack of response; for the companies operating the website it's whether or not the server is supporting casual lookers at the expense of order processing. Local.Net's tiered ShopZone services makes both happy with back-end software (HP WebQoS) that enables operators to proactively manage server response times for all users while specifying classes of users to be automatically have preferential service, i.e. those placing orders, high-volume customers, etc. Casual users can see a clock that indicates how quickly their requests will be completed if the server is backlogged.

WebQoS 2.0, a server-based software, works with the Webserver and network transport to support its features. In general, there are three key features to WebQoS: peak-usage management, user class tagging, and service class identification.

Peak-usage management is similar to the "take a number" method of traffic control employed in many face-to-face customer service situations. This technology prevents system overload and performance degradation, even during unexpected heavy traffic periods, by prioritizing requests to maximize the number of completed business transactions.

The software can also limit the number of a site's concurrent users to keep performance high and help avoid failures. With a soon-to-be released feature, users trying to access a full site may be shown a window with a clock counting down until the site is

available; this window can then automatically connect them to the site.

Identifying user classes allows businesses to assign priorities and offer higher service levels to website customers who are in the process of completing a transaction or who are premier customers.

During peak-usage periods, identifying service classes improves a businesses' abilities to generate profits. System resources during busy periods are prioritized to ensure that priority transactions, like purchasing, are given precedence over general browsing.

Other features of WebQoS Version 2.0 allow service providers to better balance server traffic among multiple machines and prevent heavy traffic to one site from impacting other businesses sharing the same server.

How to Eliminate Technical Barriers to e-Commerce

"Even with the availability of such cutting-edge technology, the costs and complexities of developing an e-business may hold many companies back" said Palmieri. "Before establishing an e-business, a company must first weigh the complexities and costs of its investments in technology, such as client/server hardware, back-office software, databases, and network management tools, with the service costs it will ultimately charge customers."

To help eliminate these barriers, companies should look to e-business hosts like Local.Net's ShopZone to provide the underlying technology and support and ease their move into e-commerce. By configuring the right mix of web technology, ShopZone is supporting a range of web hosting services at costs appealing to an untapped market of businesses (not much more than the cost of a regular e-mail account with a provider like America Online).

Eliminating concerns over securing website transactions, Local.Net has employed technology to ensure the security of customer credit card numbers. For sellers, real-time credit card verification is provided on ShopZone through CyberCash, ICVerify, NetVerify and Authorize.net. Similarly, companies wanting to do business over the web must have a solution for streamlining and

automating tax and shipping calculations, which is addressed on the ShopZone site.

In addition, Local.Net's on-line web-design application makes it quick and easy for new e-commerce entrepreneurs to bypass the delay and cost of web design and setup. Wizards automate the repetitive work of creating product catalogs, shopping carts, customer forms, shipping and tax calculations, and more. Fifty editable style templates are available to speed site development, yet ShopZone also allows companies to retain their investment in other products, from HTML editors to database programs, by seamlessly integrating with leading development products.

By automating the development process and providing a hosting site that addresses functionality and capacity, many of the earlier barriers (time, cost, complications requiring programming or third party technical expertise) for small to medium sized companies are overcome. It is feasible, given Local.Net's recent success at driving down cost and complexity of e-commerce technology, for business owners to create working websites and generate e-commerce profits within a matter an hour or two. "What this all means" said Palmieri, "is that the billion dollar projects for e-commerce growth now have a perfect technological foundation."

Summary: Can e-Commerce Be Any More Pervasive?

As we near the year 2000, it is increasingly obvious that virtually no industry will remain untouched by e-Commerce. The flurry of Internet-related technologies that can be employed, coupled with the uncertainties surrounding the year 2000 systems problem, and the growing acceptance and reliance

upon the Internet presses IT executives at companies large and small to implement technical solutions supporting e-Commerce. Some will be more successful than others and we're certain that commerce established on Local.Net services will be among the leaders.

For more information about Local.Net, contact Vincent Palmieri, President of Local.Net, San Bernardino, CA. URL: shopzone.local.net