Examining commercial transactions closely is like pointing a microscope at a water droplet: what seems empty and indivisible from a distance is actually teeming with life. Markets are usually described with three components: buyers, sellers, and intermediaries. To function successfully, though, they also require enabling services, some provided by the participants and some delivered through third parties. These commerce enablers are the glue that makes relationships sticky, the lubricants that make markets liquid, the chains that link local markets to global participants and the conduits that carry transactions from sellers to buyers.

In both the business-to-consumer (B2C) and business-to-business (B2B) contexts, e-commerce is now big enough to support specialized enablers who plug into and enhance other sites. Companies are now addressing ratings, mediation, deep community features, trade credit and fraud screening, among other services. Initially, these features simply bring online marketplaces up to par with their physical-world competitors. Ultimately, though, they promise to take e-commerce beyond what is possible offline.

As markets become more sophisticated, more automated and more virtual, enabling services become more important. Interactive commerce platforms such as BroadVision and Vignette (see Release 1.0, September 1998) and dynamic-pricing engines for B2B marketplaces (see Release 1.0, September 1999) can efficiently match large numbers of buyers and sellers. Other systems, including the B2B platforms of CommerceOne and Ariba and various flavors of search and match-
ing engines, facilitate the steps leading up to a transaction, such as bidding, product identification and purchase orders.

With all companies becoming Internet companies, though, the basic inefficiencies of matching buyers and sellers will disappear. Other sources of friction in the transaction chain therefore become more important – and more of an opportunity to resolve. As we discovered when purchasing a New York City co-op earlier this year, a deal between buyer and seller is only the first step.

Many processes kick in only after the parties reach agreement. Some involve fulfillment – getting the goods from one party to another. Others transfer payments from buyer to seller, with all the protections and recordkeeping required. Others handle information flows within organizations. Others aggregate or manage data flows between market participants who wish to learn from one another while keeping their confidential information confidential. Still others come into play either to prevent something from going wrong, such as fraud screening, or to resolve conflicts when something does in fact go wrong, such as arbitration or mediation.

E-commerce enablers tackle these challenges. Their businesses make sense only if there is sufficient volume, because by and large they live off per-transaction fees. If they are successful, however, they can develop symbiotic relationships among networks of marketplaces. The enablers can succeed, and they can also help their customers move further down the all-important path to profitability.

**Why enablers?**

Enablers are not unique to the online world. In the old days, the corner store served many different functions, ranging from credit evaluations to personalized recommendations to home deliveries. (In the really old days, the merchant and the producer were the same entity.) Continued economic development, especially in information technology, has allowed specialists to take on many of these
roles. Supermarkets turn to data-mining tools vendors such as NCR to analyze the huge volumes of transaction data they collect. Credit-card issuers and banks assess creditworthiness and screen for fraud. Courts adjudicate disputes.

On the Net, where everything is pure information, it becomes possible to deliver even more services as specialized, outsourced components. Some aspects of Net markets are unique, while others are common across different types of products and services. The Net allows companies to combine subsets of internal and external resources to deliver optimal bundles to customers (see Release 1.0, July/August 1999; Release 1.0, April 2000). Customers don’t care who provides what functionality, so long as they get seamless interfaces and a productive user experience.

Enablers as differentiators
Despite fears that the Net would create an orgy of commoditization as consumers comparison-shopped away margins, e-commerce has turned out pretty much like the real world. The store with the cheapest price often doesn’t win. Amazon.com’s “random pricing” experiments on DVDs created a stir because consumers feared prices were being tied to their demographic information. Yet the basic notion that merchants charge what the market will bear, and that the market may bear a higher price for companies with established brands and loyal customers, is nothing new.

What has become increasingly commoditized online is the basic back-end functionality for e-commerce. Companies such as Bigstep.com already provide commerce functions such as dynamic storefronts, transaction-processing and reporting for free or nearly free. Though the barriers to entry are higher in B2B, competition among marketplaces is already pushing down margins and threatening the viability of many exchanges. To avoid this death spiral of commoditization, marketplaces and their technology suppliers must differentiate their offerings and thereby create sticky user experiences that bring customers and other market participants back despite the competition. Enablers promise to address these needs.

Commerce is based on relationships. Customers return to stores that provide them with a good experience. As the authors of the Cluetrain Manifesto (see Release 1.0, February 2000) emphasized, markets are conversations, and open multi-lateral communication is particularly important to commerce online. Those relationships don’t spring up overnight. They require participants to be convinced that the commercial entities they deal with are real, and that they actually listen. The marketplaces must understand their users, and must help them communicate with one another.
Merchants and marketplaces themselves are not always best-positioned to address these needs. Some determinations, such as fraud screening and credit scoring, involve complex algorithms and risk-management expertise. In other cases, only a neutral third party has the requisite credibility. Even when the market-owner provides tools for participants to communicate among themselves, the freedom of speech granted is suspect: the environment resembles the food court at a shopping mall more than Speaker’s Corner at Hyde Park.

There are many different kinds of enablers, and far more companies fitting this description than we could cover in one issue. Below, we describe enablers addressing some of the most important limiting factors to the growth of e-commerce.

**Building Trust**

Trust is essential to commercial relationships (see Francis Fukuyama in *Release 1.0*, March 1996; *Release 1.0*, September 1999). It has two essential components—trust before and after a transaction. Buyers and sellers must have enough initial confidence to deal with each other. They achieve this level of trust through a track record of prior interactions, or by studying information that provides some assurance. The challenge online is that it’s not always clear whom you’re dealing with. Even when the other party is identifiable, it may be a new player who doesn’t have much of a history to examine.

The second aspect of trust concerns what happens after the transaction. Even in the best of circumstances, things sometimes go wrong. Goods don’t arrive on time; they arrive broken; they aren’t what you expected. Good customer service is one way to preserve and re-establish trust in these circumstances. But sometimes that’s not enough, because there is an honest disagreement among the parties. In those circumstances, some mechanism is needed to mediate or arbitrate disputes.

Trust can be promoted in commercial transactions through either substantive or procedural mechanisms. Substantive trust is based on experience: You’ve known the pharmacist at the corner drugstore for 15 years; your best friend told you about the great experience she had with L.L. Bean thanks to its generous return policy; each time you’ve ordered, Proflowers.com has delivered quality flowers on time at affordable prices. Procedural trust involves formal mechanisms to measure and verify the attributes that promote trust. These mechanisms should in theory be more accurate
and reliable. However, they are harder to implement and often address only specific aspects of the trust relationship.

Both substantive and procedural trust are important, but in the physical world substantive trust dominates because procedural mechanisms require access to information that isn’t often readily available. On the Net, in contrast, information is easily available and computers can effectively automate measurement processes, whereas substantive trust is less developed because no one has a long track record. Substantive trust remains essential, and is something both B2C and B2B marketplaces must engender to succeed. In this issue we focus on procedural mechanisms, which can span many sites.

A good example of a trust-enabler is Open Ratings, which launched at this year’s PC Forum (see RELEASE 1.0, MARCH 2000). Open Ratings has developed an Internet-wide tamper-resistant ratings system for commerce sites, with an emphasis initially on B2B marketplaces. Ratings give market participants confidence that the companies and individuals they deal with have a good track record, which makes them more likely to transact with parties they don’t know directly. In recent months, Open Ratings has partnered with B2B solutions vendors such as CommerceOne and
SupplyWorks, and has forged an alliance with Dun & Bradstreet to couple its ratings with D&B's comprehensive business information database.

Trust has many dimensions. GeoTrust (see page 5) manages and verifies third-party profiles of market participants. Companies such as SquareTrade and CrediView (see below) address negative outcomes such as fraud and disputes that can cause market participants to lose faith in the marketplace and can drain significant revenues from those marketplaces. Other organizations such as TRUSTe (see Release 1.0, February 1997; Release 1.0, April 1998) and Clicksure offer seals that Websites can display to give users confidence they adhere to posted practices regarding such things as user data. Then there are accounting firms such as PriceWaterhouseCoopers, which are beginning to do a brisk business in privacy audits and other services that leverage their own trusted brands.

SquareTrade: Getting back to yes (when things go wrong)

Companies such as Open Ratings promote trust by convincing buyers and sellers things won't go wrong. But what if, despite best intentions, something does go wrong? SquareTrade fosters trust with services for those times when disputes arise. In the physical world, frustrated buyers and sellers have options ranging from threatening letters on legal stationery to mediation, arbitration and litigation. All these are still available when the transaction occurs online, but physical distance between the parties may make them difficult to utilize. Moreover, such physical-world recourse mechanisms impose substantial costs and headaches that participants, especially small businesses and individuals, may be loath to take on.

Trust-enhancing dispute-resolution mechanisms are most clearly needed on person-to-person transaction sites such as eBay. In such an environment, neither party is necessarily an established merchant, and the parties are unlikely to have done business with one another before. It’s not an accident that eBay was among the first sites to offer user-generated ratings. Then again, as SquareTrade ceo Steve Abernethy points out, the need goes beyond auction sites: “Disputes happen. Where you have commerce, you have disputes.”

Abernethy co-founded SquareTrade a year ago with fellow Harvard MBAs and McKinsey consultants Ahmed Khaishgi and Lalitha Vaidyanathan. The company offers a variety of mechanisms for person-to-person sites as well as B2C environments. For sellers or marketplaces, the company offers a seal that indicates a commitment to use SquareTrade's dispute-resolution services. As with the TRUSTe and
Better Business Bureau seals for privacy protection, the SquareTrade seal enhances trust, but it addresses only some of the problem. When something goes wrong, SquareTrade offers free automated email-based mediation services as a first step. The system walks users through a structured interface to communicate problems, identify desired outcomes and seek resolution.

If that fails, SquareTrade has assembled a network of over 250 professional mediators. Using Web-based communications tools, each mediator seeks to bring the parties to a mutually agreeable settlement. “The dispute process gets [the parties] to communicate,” explains Abernethy. “The power of an online solution is you’re able to turn emotions into more objective discussions of facts.” Depending on the preferences of the marketplace and the parties, agreements can be backed by formal judicial enforcement, revoking seals or trading privileges, or posting histories on the site.

The argument for sites to use SquareTrade is straightforward, according to Abernethy: “If you have a dispute and don’t have a process, you’ve lost a customer.” Early results back him up. Since SquareTrade launched in early February, more than 17,000 disputes have been filed with the service. Abernethy says over 80 percent of people who used one of SquareTrade’s mechanisms indicated they would be comfortable transacting again with the merchant or site involved, versus less than 25 percent of customers who had a dispute but didn’t use the service.

In early August, following an extended beta period, SquareTrade signed a two-year agreement to become eBay’s exclusive online dispute-resolution provider. The service is also available on Onvia, DoveBid, HelloBrain and eLance. SquareTrade has signed up several cyberlaw and negotiation experts, including David Johnson (see RELEASE 1.0, JUNE 1996) and Roger Fisher, as advisors.

SquareTrade charges for the seals on a revenue-based sliding scale starting at $100 per year, and charges fees for human mediation of approximately $40 plus a percentage of the transaction value. Marketplaces can subsidize these costs for their participants as a means of stimulating transactions, or bundle them into their own fees. eBay, for example, subsidizes the mediation fee down to $15.
CrediView: Trust, but verify
Prospective customers must trust online marketplaces, but the reverse is also true. Fraud is a huge problem for e-commerce sites, far worse than in the physical world. A company that ships a product to a purchaser in return for a credit-card number would like assurance that it will get paid, since fraudulent transactions cost merchants both the price of the merchandise and the chargeback fees that credit-card processors impose.

Online fraud takes many forms; there is no perfect solution. (And fraud is part of a larger set of risks. See Bruce Schneier’s recent book *Secrets and Lies* for a comprehensive overview of the stunning range of online security issues.) To combat this problem, many sites have hired fraud specialists and in some cases have taken more draconian steps such as rejecting all transactions to shipping addresses in certain countries. Software companies such as CyberSource and eHNC offer fraud-screening solutions, but many fraudulent transactions still get through.

CrediView takes a novel approach to this problem. The company, founded by CEO and computer-science PhD Ron Rymon, identifies fraud by detecting patterns in transactions rather than people. Instead of compiling a database of credit-card numbers, CrediView asks merchants to provide various parameters about the transaction, such as information about how much time the customer spent on the site, whether or not they are an existing customer, what other items they viewed before making a purchase and whether the purchased item was expensive or inexpensive. CrediView sends the information through proprietary algorithms to identify suspicious transactions. Merchants can determine which characteristics to pass to CrediView, though the more information they provide, the more accurate the risk scoring.

Because it doesn’t profile purchasers or handle credit-card data, CrediView avoids the privacy issues that bedevil other fraud-detection providers. None of the information CrediView requests uniquely identifies users. CrediView stores only as much information as necessary to further minimize privacy and security risks. For example, if it’s providing only scores to the merchant, it doesn’t save the scores after it transmits them.

Rymon says that, in a trial based on historical data with a large online merchant, CrediView was able to identify over 90 percent of fraudulent transactions, with only about four percent coming back as false positives. The company offers customers an
optional guarantee, under which CrediView pays both the cost of lost merchandise and the chargeback fee in the case of any fraud it misses. CrediView charges extra for the guarantee based on the nature of the site and its own risk assessment, which its team of risk-management experts are presumably in a better position to calculate than most merchants.

CrediView offers its service as an application service provider (ASP). Merchants add a small amount of code to pass information to CrediView, and they can also create a workflow for processing different types of transactions. CrediView returns a risk score for each transaction, and recommends approval, rejection or investigation, along with an explanation of the reasons for high scores. Merchants can conduct investigations themselves, using information screens that CrediView provides, or they can pay to have a third party do so for approximately $3 per transaction.

CROSSING THE BORDER

Law is another force that promotes trust in markets. As Esther Dyson points out in her latest syndicated column (AVAILABLE AT HTTP://WWW.RELEASE1-0.COM), the Net promises to create new semi-private forms of market regulation that will be more efficient than existing government-mandated rules.

Getting there, however, may be messy. In some cases where transactions span jurisdictions, it's no longer clear which set of rules applies. The debate over online privacy, pitting the more market-based US approach against the European legal framework, is a case in point (SEE RELEASE 1.0, APRIL 1998). Virtually everyone agrees that some protection for private data is important for consumers and businesses to feel confident transacting online. But market participants and governments disagree on just what that protection should be, and on how to ensure it.

Among the most difficult issues are those that arise when markets are online and thus borderless, but the goods transacted must move across physical borders. Duties, customs rules, taxes and import/export restrictions vary from country to country and between different pairs of countries, creating huge overheads for businesses interested in transacting internationally.

Mercury2, a startup based in San Francisco, hopes to smooth this process with an automated system for the calculations, documentation and regulatory screening involved in international trade logistics. Founder and CEO Christine Herron, most recently with NetObjects, has assembled a formidable group of Net policy experts as directors and advisors, including former National Security Agency general counsel Stewart Baker, former Federal Trade Commissioner Christine Varney and former Netscape global public policy counsel Peter Harter.

International trade involves other challenges beyond the legal issues. In global commodities trading, fraud and misrepresentation are major issues. Even if transactions take place online, banks must issue cumbersome letters of credit for high-value transactions, and fulfillment still involves multiple brokers linked in personal trust networks.

Paul Mann, who has been in the international trade field for 15 years, set out to address these problems without changing the aspects of the process traders feel comfortable with. His company Cavio, based in Seattle, WA, with development offices in Vancouver, Canada, is creating a secure private network using biometric fingerprint scanners based in banks around the world. Once traders enroll at their local bank, they will receive personal fingerprint readers to use when authorizing a transaction via the Web. The information is passed to the bank, which verifies the parties' identity and can handle the funds transfer on a bank-to-bank basis.
Communities for Commerce

Trust establishes a baseline willingness of parties to do business with one another. The most active and liquid markets, though, tend to feature an even higher level of comfort and interest among participants. From the emotional waves of commodities trading pits to the rich interactions among book reviewers and purchasers on sites such as Amazon.com, such markets feed upon themselves. Community tools are one means to foster such an environment.

We've often written often about the power of online communities (see, e.g., RELEASE 1.0, JUNE AND JULY 1993). As articulated in John Hagel's book NETGAIN, communities can be important commerce drivers. Community tools such as discussion boards have thus become de rigueur for e-commerce sites. Companies such as Deja.com and Epinions have structured businesses around user feedback about products.

Community means something different in a commercial context from a social environment. When people get together to talk or to share interests, they may discuss and recommend products and services as part of their discussion, but commerce isn't the primary focus of the activity. The most prominent example of a community (or network of communities) centered on commerce is eBay. eBay works because it straddles the line between commerce and community, without overly diluting either. In addition, commercial communities expect more than just communications tools; they want resources that help them buy or sell effectively. The content and discussion features on some of the VerticalNet B2B properties are good examples (see Mark Walsh discussion in RELEASE 1.0, MARCH 2000).

Successful communities are fractal. As they grow, they increase in richness and become too large for the direct, targeted interpersonal connections that got the community started in the first place. New niche communities or meta-communities spring up within and across the established communities, providing more focused or more sophisticated services.

AuctionWatch.com: bidding for success

AuctionWatch.com is a meta-eBay. Just as eBay started as a quirky labor of love (Pierre Omidyar's Web page to help his wife trade Pez dispensers), AuctionWatch began as a message board for auction-related discussions. Mark Dodd, now the company's vp of product development, started the discussion board on his personal Website to share impressions with fellow auction enthusiasts.
It’s hard to remember that, in the days before eBay’s 1998 IPO, the idea of auctions as a viable online business was hardly taken for granted. With the success of eBay, however, many other auction sites sprang up, including major competitors such as Yahoo!, Onsale and Amazon.com. Dodd’s site rode the growth of auctions in general, and benefited from the diversity of auction sites because it allowed discussions beyond a single site. To develop the site, Dodd hooked up with Stanford MBA Rodrigo Sales, who became AuctionWatch’s ceo when the two incorporated the company in January 1999.

AuctionWatch still offers discussion boards that auction participants can use to compare notes on different sites, selling techniques and so forth. It complements these with news and commentary produced by its own staff. In addition, AuctionWatch offers a full suite of tools sellers can use to manage inventory, launch and track multiple auctions and display pictures of items they offer. “What we provide are the tools that enable both small and large businesses to, in a very efficient manner, distribute product across multiple online marketplaces,” explains Sales. About thirteen percent of eBay auctions now originate on AuctionWatch’s site.

For buyers, AuctionWatch has created a search service to find products across multiple auction sites. Though eBay successfully sued competitor Bidder’s Edge for deploying a similar search engine, on the grounds that spidering eBay’s auction listing constituted trespassing, it has so far not gone after AuctionWatch. Sales attributes this to AuctionWatch’s offering tools for both buyers and sellers, so that it enhances eBay’s traffic rather than siphoning it away.

Finally, AuctionWatch offers fulfillment services to simplify the process of payment, shipping and insurance around auctions. The site now has just under 4 million unique visitors per month, processes over 100,000 searches per day, and has over 500,000 registered users (primarily sellers, since buyers need not register to use the search tools). Sales claims AuctionWatch is ahead of competitors such as Bidder’s Edge, Andale and AuctionWorks because of its traffic and breadth of offerings, and also because it’s the only one to serve both buyers and sellers.

AuctionWatch recently announced that it was expanding beyond auctions to offer fixed-price listings in its search interface. Sales sees the distinctions between auction sites and other marketplaces decreasing in the future, as sellers focus on the liquidity...
that popular marketplaces such as eBay offer. Parallel to the buy-side procurement systems of companies such as Ariba, he believes AuctionWatch can offer tools and services to integrate sellers into marketplaces. AuctionWatch plans to deliver more services for large customers, such as integration with ERP systems, as it moves beyond its base in the small to medium businesses prevalent on auction sites.

**Question.com: answers for B2B marketplaces**

B2B marketplaces need enabling services to generate liquidity as much, if not more than, B2C commerce sites. Though digital marketplaces are often perceived as vast impersonal catalogs and transaction-matching engines pairing buyers and sellers for high-volume deals, even businesses want a comfortable, familiar environment in which to transact. The major B2B technology players have focused up to now on processes rather than people.

Question.com comes at the problem from the other direction. The company was spun out of Ventix, an Austin, TX, online question-answering startup, when it was acquired by customer-support automation company Motive (see [Release 1.0](#)), October 1998) in January. Question.com’s customers include VerticalNet, MetalMaker, NetworkOil and GE Global Exchange Services.

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Question.com makes it easy for prospective buyers in B2B marketplaces to ask questions of industry experts, vendors and other buyers. On B2C sites, the question-and-answer process is usually a customer service provided by the merchant. In contrast, B2B environments are networks with many buyers and many sellers that also serve as vertical industry information hubs. Question.com allows vendors and independent experts to set up mini-sites that describe their skills and offer free or paid content. The company also manages the search and workflow processes for submitting questions, finding the appropriate expert, and getting answers.

“We’re helping people develop relationships where they previously haven’t had them,” explains co-founder and exp Dave Panos. Business buyers of complex and expensive products often need additional information from vendors or third-party experts. Even on a site that sells commodity products, such as electronic component marketplace (and VerticalNet subsidiary) NECX, buyers may need help determining which product is right for them.
Question.com puts those resources inside the B2B marketplace, helping buyers make decisions and thus facilitating more transactions. Or as co-founder and CEO David Sikora puts it, “Commerce will result from new relationships being formed and interactions after those relationships are created.” For the vendors and experts, Question.com provides a new channel for marketing their services, piggybacking on the traffic of the exchange.

Question.com offers professional services to help marketplaces integrate its features, and also gives marketplaces tools to track and measure activity resulting from the questions. Knowing what kinds of questions participants are asking (not to mention how often those questions are answered) is useful feedback for B2B exchanges.

Financial Flows

Money is of course a major component of commerce. If sellers aren’t sure of being paid, transactions won’t happen. And even when sellers have that confidence, as in most business-to-business and international transactions, the mechanics around payment and credit can consume significant time and resources.

There have been many efforts to create new online payment systems and currencies (See Release 1.0, October 1999). As we’ve argued, some new payment mechanism is likely to emerge to address the new global marketplace. Electronic payments, though, don’t address many of the inefficiencies companies experience in managing financial flows. Most B2B transactions involve credit, which requires both front-end risk assessment and back-end recordkeeping. These processes, by and large, remain highly manual even when the transactions themselves occur online.
Aceva: Credit where credit is due

“In some ways, I would argue that Internet commerce does not exist today,” says Aceva CEO Sundeep Jain, pointing out that most transactions aren’t yet automated end-to-end. E-commerce technology companies and online marketplaces have generally focused on the front end of transactions: automating procurement workflow; matching buyers and sellers; moving product and customer information between systems; and confirming orders. When it comes to pay, though, inefficient pre-Internet processes reappear.

Consumer transactions and small business purchases can use credit cards, but the majority of B2B transactions involve trade credit, which usually means a series of manual steps culminating with paper checks sent through the mail. Underwriting, invoicing and settlements eat up substantial resources, mitigating many of the promised benefits of e-commerce. In some ways, the Net actually makes these processes more difficult. Disintermediation means manufacturers are now selling directly to businesses they previously reached through distributors, but they are often unprepared to assume the credit risks of these new customers.

Jain says his own experience in financial operations at large organizations such as Bain and Bell Labs convinced him there were significant pain points in the back end of B2B commerce, but, “It was very difficult to effect this change from the inside.” So he founded Aceva last year to address the problem from the outside.

Aceva offers a complete system for credit, accounts payable and receivable, settlements, reporting and interactions with financial institutions. The platform allows market participants to make real-time credit decisions, set terms (Net X, revolving lines of credit, etc.), authorize and settle payments and resolve disputes. Aceva partners with banks and other financial institutions to bring their underwriting services directly into B2B marketplaces.

Marketplaces can use the platform to offer value-added services to market participants, which Jain argues is essential if they are to succeed long-term. “E-marketplaces are nothing more than dating services that match buyers and sellers, then they step away from the transaction,” he argues. Using Aceva, marketplaces can themselves extend trade credit on behalf of multiple buyers and sellers, along with the necessary invoicing, billing and reporting. This helps marketplaces become central...
to the entire transaction lifecycle, rather than just introducing the parties, and helps them drive more transactions by enhancing trust and efficiency.

Aceva charges a combination of monthly licensing fees and per-transaction charges, in addition to setup and professional services fees. The company has signed 21 customers, nine of which are live, including Buy.com.

**Beyond Markets?**

The more that specialized enabling services become essential parts of transactional sites, the more e-commerce will look like an onion: peel back the layers and you won’t find anything left at the center. Our traditional models for commerce are centralized, like client-server or mainframe models for computing. Participants travel to a store, a flea market, or a trading pit, where they conduct business. E-commerce has so far tracked these physical world models through central sites such as Amazon.com, eBay and VerticalNet.

The Net, though, is decentralized to its very core (if it even has a core). Content-delivery networks such as Akamai (see **Release 1.0, December 1999**) have shattered the notion that Websites are self-contained fortresses that reside in one place on the network. With syndication technologies (see **Release 1.0, July/August 1999**), a page can be assembled on the fly from dynamic components scattered across the Net. And the explosion of interest in peer-to-peer (P2P) computing thanks to Napster (see **Release 1.0, April 2000**) has catalyzed many projects that take the distributed nature of the Net to its logical conclusion.

**The Napsterization of commerce**

What does this mean for commerce? Thanks to affiliate programs, many B2C sites already distribute their transaction capabilities to networks of other sites, though they still bring traffic back to the mother ship whenever possible. The growth of commerce enablers suggests that something deeper may be around the corner. Commerce has always been centralized because of the economies of scale involved. The first wave of e-commerce eliminated some of those scale barriers, involving the time and space dimensions of going to a physical-world store. If other functions such as trust, community and finance can similarly be constructed in a distributed environment, the Napsterization of commerce can proceed.
Some aspects of commerce, such as warehousing and logistics, are irreducibly physical, at least when they involve non-digital goods. If everything else is automated and distributed, though, more transactions will be conducted on a peer-to-peer basis. Some marketplaces may be broad enough that they can drive sufficient internal efficiencies through the transaction data flows they generate (Amazon.com’s strategy). Others will have to offer more value-added than they do today, either by becoming very specialized and expert in a particular kind of transaction, or by reselling enabling services themselves (such as Question.com’s integrated expert sites).

Even when some intermediary is involved in transactions, though, it will increasingly be connected deep into the processes and systems of market participants. Aceva’s integration of internal financial processing with online marketplaces and AuctionWatch’s auction-management tools are good, if early, examples. XML-based technologies such as SOAP (a foundation of Microsoft’s .Net) and Bowstreet’s business web architecture will take process integration much further. The lines between external markets and internal supply chains will become increasingly blurry.

This shift will have major consequences for all types of markets, but the consequences will be particularly profound for B2B exchanges. It has been less than two years since B2B marketplaces began to attract attention, and in most major vertical markets the deployment process has only just begun. Yet entrepreneurs are already thinking beyond the aggregation of buyers and sellers. In large, fragmented verticals, the money and time lost to complex, manual processes around management, approvals and record keeping dwarf price inefficiencies. Veranto, a medical-industry marketplace started by NetDynamics founder Zack Rinat, is among the first to concentrate on these industry-wide inefficiencies.

We’re coming to the end of the first phase of e-commerce in the US, analogous to Marx’s primary accumulation stage of capitalism. Virtually every company of any size is online, as are a critical mass of individuals in most developed countries. Evolution in the future will be driven less by expansion of the market (though that will continue) than by innovation in services and technologies. In the full flowering of e-commerce, everyone will be an enabler.
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Zack Rinat, Veranto/Model N, 1 (650) 622-9340; fax, 1 (650) 622-9344; zrinat@modeln.com
Calendar of High-Tech Events

2000

OCTOBER 23-27  INTERNET WORLD - New York, NY. This behemoth of a conference makes its annual stop on the East Coast. To register, call 1 (800) 632-5537; email registration@iw.com; www.pentonevents.com/fall2000.

OCTOBER 24-25  EMERGENCE - Budapest, Hungary. Will discuss the 22-country survey of e-work location being carried out by the EMERGENCE project, funded under the European Commission’s Information Society Technologies Programme. For info, fax +32 (2) 296-8388; email, ist@cec.eu.int; www.emergence.nu.

OCTOBER 27-29  CAMDEN TECHNOLOGY CONFERENCE - Camden, M.E. This year’s event is titled Pop!Tech 2000: Being Human in the Digital Age. To register, call 1 (888) 877-3128; info@poptech.org; www.camcon.org.

OCTOBER 29-31  FC:LIVE - Phoenix, AZ. Fast Company’s Realtime conference for companies seeking a speed boost. For more details, see www.fastcompany.com/live.

OCTOBER 30-31  NDA 2000 - Carlsbad, CA. The Red Herring’s annual look at new companies and trends. For more information, sign your John Hancock, or call 1 (888) 286-2167; www.redherring.com/events/nda2000.

OCTOBER 30 - NOVEMBER 1  WEB2000 - San Francisco, CA. For web professionals by web professionals, master standards and best practices, discover new tools and techniques and explore emerging technologies. Contact Rafael Robles at 1 (800) 441-8826; rrobles@cmp.com; www.webshow2000.com.

OCTOBER 31 - NOVEMBER 1  PRIVACY2000 - Columbus, OH. Presented by the Technology Policy Group, this year’s theme is: Information, Security & Ethics in the Digital Age. Speakers include Jason Catlett, Ari Schwartz and Glee Harrah Cady. For more info, fax, 1 (614) 292-1992; bermann@osc.edu; www.privacy2000.org.

NOVEMBER 1-3  EDVENTURE’S HIGH-TECH FORUM - Barcelona, Spain. This year’s theme is “Clicks and Borders.” The event is filling up fast, so get your registration in soon! Call Daphne Kis, 1 (212) 924-8800; fax 1 (212) 924-0240; daphne@edventure.com; www.edventure.com/htforum2000.html.

NOVEMBER 6-8  EMEVIATION WORLD - New York, NY. This media and entertainment conference makes its East Coast debut and prepares to razzle dazzle ‘em. Contact Shay Andrews at 1 (800) 535-1812 x202 or email sandrews@emarketworld.com; www.emediatainmentworld.com.

NOVEMBER 8-10  EXECUTIVE STRATEGY FORUM - Boston, MA. Sponsored by Forrester Research with tips on plotting your e-business transformation. Contact Forrester Events at 1 (888) 343-6786; www.forrester.com.

NOVEMBER 8-10  ISPON - San Jose, CA. Internet service providers mull the implications of “Making connections. Building empires.” Contact dara.mccathran@expoexchange.com; www.ispcon.com.
Calendar of High-Tech Events

<table>
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<tr>
<th>Date</th>
<th>Event Name</th>
<th>Location</th>
<th>Details</th>
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<tr>
<td>NOVEMBER 8-10</td>
<td>AD:TECH - New York, NY. Internet advertising, marketing and eCommerce. For more info, call 1 (800) 535-1812; fax, 1 (804) 643-7479; email, <a href="mailto:registration@marketworld.com">registration@marketworld.com</a>. <a href="http://www.ad-tech.com">www.ad-tech.com</a>.</td>
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<td>NOVEMBER 9-10</td>
<td>TECHNOLOGY &amp; SOCIETY - Reston, VA. The fourth annual conference, sponsored by The Cato Institute and Forbes ASAP, will focus on how the confluence of entertainment and technology is reshaping industries in both areas. For more info, please contact Jerry Brito at (202) 218-4621 or email <a href="mailto:jbrito@cato.org">jbrito@cato.org</a>. <a href="http://www.cato.org/events/techconf00">www.cato.org/events/techconf00</a>.</td>
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<td>NOVEMBER 9-10</td>
<td>E-BUSINESS IN CENTRAL AND EASTERN EUROPE - Prague, Czech Republic. Sponsored by the Economist Conferences, with a focus on strategy issues of e-business. Contact Kirsten Rae, +43 (1) 7124-1614; fax, 43 (1) 712-4165; email, <a href="mailto:kirstenrae@economist.com">kirstenrae@economist.com</a>. <a href="http://www.economistconferences.com">www.economistconferences.com</a>.</td>
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<td>NOVEMBER 11-12</td>
<td>DOORS OF PERCEPTION 6 - Amsterdam, Netherlands. For design pioneers of the Internet and the entrepreneurs and visionaries who would like to work with them. This year’s theme is “lightness” and focuses on social needs over technology-push on the agenda of innovation. To register, +31 (20) 596-3220; fax, +31 (20) 596-3202; <a href="http://www.doorsofperception.com">www.doorsofperception.com</a>.</td>
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<td>NOVEMBER 12-14</td>
<td>PERSONALIZATION SUMMIT - San Francisco, CA. We know who you are. Speakers including Esther Dyson, Geoffrey Moore and Martha Rogers address personalization and ROI. Call 1 (415) 544-9300; fax, 1 (415) 544-9306; <a href="http://www.personalization.com/summit/SF_2000/over.html">www.personalization.com/summit/SF_2000/over.html</a>.</td>
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<td>NOVEMBER 13-16</td>
<td>ICANN SECOND ANNUAL MEETING - Marina Del Rey, CA. Help shape the future of Internet addressing. See <a href="http://www.icann.org">www.icann.org</a> for more information.</td>
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<td>NOVEMBER 13-17</td>
<td>COMDEX - Las Vegas, NV. Check out all the new Vegas hotels, and see a few products along the way. To register, call 1 (781) 433-1665; <a href="http://www.key3media.com/comdex/fall2000">www.key3media.com/comdex/fall2000</a>.</td>
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<td>NOVEMBER 28-29</td>
<td>CANARIE’S 6TH ADVANCED NETWORKS WORKSHOP - Montreal, Canada. Fiber for everyone! For registration info, call Susy Carrière at 1 (613) 943-5436; email, <a href="mailto:susy.carriere@canarie.ca">susy.carriere@canarie.ca</a>. <a href="http://www.canarie.ca">www.canarie.ca</a>.</td>
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<td>DECEMBER 4-7</td>
<td>GROUND ZERO 4 - Los Angeles, CA. Net market makers gather to ponder what lies beyond the smoking ruins of the current market for B2B stocks. For more info, contact Margie or Kristine at 1 (510) 647-3799 or email, <a href="mailto:margie@netmarketmakers.com">margie@netmarketmakers.com</a>. <a href="http://www.nmm.com/events/groundzero4">www.nmm.com/events/groundzero4</a>.</td>
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<td>DECEMBER 7-8</td>
<td>JUPITER ONLINE ENTERTAINMENT FORUM - Los Angeles, CA. Is the Internet a viable medium for entertainment? To register, call 1 (800) 611-1693; fax, 1 (212) 475-3896; email, <a href="mailto:customerservice@jup.com">customerservice@jup.com</a>. <a href="http://www.jup.com/jupiter/events">www.jup.com/jupiter/events</a>.</td>
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Events Esther plans to attend.

Events Kevin plans to attend.

Lack of a symbol is no indication of lack of merit. The full, current calendar is available on our Website, www.edventure.com. Please contact Kara Holmstrom (kara@edventure.com) to let us know about other events we should include.
Join our new email list! We've started a free email newsletter, *The Conversation Continues*, for commentary, industry analysis and pointers to interesting Websites. To sign up, please visit [http://release1.edventure.com/conversation](http://release1.edventure.com/conversation), or send email to conversation@edventure.com and you'll automatically be added to the list.

Last chance to register for EDventure's High-Tech Forum, **November 1 to 3, 2000** in **Barcelona, Spain**! For details and a speaker list, please visit [http://www.edventure.com/htforum2000.html](http://www.edventure.com/htforum2000.html).

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