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E-Commerce Standards

Standards, standards everywhere!

Don't bother tracking the proposed e-commerce standards too closely right now--the landscape is changing on an almost a daily basis.

Datamation

June 1999

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EDI System Obstacles

Data

- Company data versus standards
- Cross industry standards
- Standards administration

Communications

- Time zones and windows
- Communication protocols
- Telecommunications equipment
- Service cost and balance

Applications

- Integration
- Features and function supported
- Interface

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E-Commerce Goal

Building a great customer experience
to develop brand preference and increase
customer loyalty to grow revenues.

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Recognizing that:

The customer experience is never perfect.

Building a great customer experience is not an event but a continual path towards online success.

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Customer Experience Strategies

1. Identify your customer's goals and your goals.
2. Commit the organization to building a great customer experience.
3. Monitor the customer experience.



Good Customer Experience Rules

1. Clear, concise web page wording.
2. Quick web page download time.
3. Appropriate web page width.
4. Simple web page design.
5. Few and small supporting graphics.
6. Large graphics only when good for the customer.
7. Jargon-free language.
8. A good search function.
9. Easy navigation.



Bad Customer Experience Rules

1. Error messages.
2. Long instructional text.
3. Excessive technology requirements.
4. Fatal errors--like database error messages.
5. Distracting screen elements.
6. Irrelevant or flashy features.
7. Typographical errors.
8. Excessive or inaccurate search results.
9. Basic web errors--"page not found."

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Internet Auctions

Auction sites like eBay are a great way to sell of extra stuff sitting around your house. An old computer you don't use anymore or that Brady Bunch lunchbox you've had since you were 12. All can bring in a little extra cash easily. Just post them on one of the auction sites, sit back, and hope the bidding gets ferocious.

While many auctions are just like that, one person selling off extra loot, more and more it's becoming full time sellers auctioning off not one or two old items, but several hundred brand new things. Instead of going through the hassle of setting up an online shop, many people are diving into auctions head first and selling their goods directly through the Internet auction site.

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eBay

Ebay has the hottest and biggest technology challenge in the Internet space.

If you take a look at a lot of the other e-commerce sites, even though they have a lot of volume and activity, the actual intensity can be pretty low.

You do a lot of batch updates to a back-end database and it looks pretty recent, but you still have to fly packages around the world, and getting updates on the packages isn't a hard thing to do -- though it is important.

eBay has an extremely tight integration between all the Web transactions and the database. The volume and the intensity put it in the Fortune-100 kind of transaction volumes.

As to the service problems at eBay, the good news is these are high-class problems to have. An extremely scalable and tight application that is all written in C++ has a lot of headroom and legs left to run. What isn't as good is reliability and availability of the platform. As a result, some of the bigger outages were because of a lack of recovery and flexibility.

There was a lack of enough hardware redundancy so if a database server crashed for any reason, all of the elements of the server itself had to be fixed to be able to roll back and get the site back up.

To fix this problem a warm backup has been created which should make it possible to get back up pretty quickly -- within two to four hours of an outage -- at any time.

By the middle of October, a high-availability backup [with fully redundant servers] make it possible to be back up within an hour. At the same time, a next-generation architecture plan is being developed to eliminate any single point of failures. This will involve distributing the application and database over multiple servers to make sure this new system can handle the 100X growth in database activity that is already being experienced.

Building a test environment to simulate all this is not a trivial thing. It is desirable to spend more time testing applications but there are also time-to-market issues.

Figuring out how much capacity is needed is an art, not a science. You have got to get more disciplined in what you do. You simply have to get tighter, simpler and be smarter on things like archiving and DASD management.

The demand grows and grows and grows.

There are a lot of tools out there to help address the capacity issues, but most of them are not geared to deliver what is really needed. The solution is to write what eBay specifically needs. Most of the time this means getting an off-the-shelf product and customizing it.

In terms of financial justification eBay feels that it knows what downtime can cost in lost revenue. It has a very strong and very loyal user community and the biggest roadblock is an inability to scale.

Hardware is cheap, the pace of the game is frenetic and being the first mover in an industry is very important. You really need to figure out what the business plan is, do a what-if scenario that is beyond your wildest dreams and build an architecture that lets you scale beyond your wildest estimation.

You quickly need to be a world-class organization to handle your technology. It is like managing a Fortune-100 kind of computing environment when your company is still a toddler.

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Online Success

Building a great customer experience is the key to online success. Creating the right experience is difficult: simplicity is not easily achieved.

E-businesses must go through a challenging, laborious process of clarifying their goals, identifying their customers and then making a commitment to create and maintain a good experience.

The good or bad news is that many companies are not doing this very well if at all.

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The Numbers Please

As of January 1999:

50.3% of US households had a personal computer

30.2% were online

10% were shopping online

54 million people are considered active Internet users

41 million people are projected to join the ranks of active users by 2002

Real Force in E-Commerce Is Business-to-Business Sales

With all the recent noise about Internet shopping, it would be easy to assume that Amazon.com, CDNow and their top competitors are the true champions of e-commerce.

The cold, post-holiday reality: they're not even in the major leagues.

If you combined the 1998 revenue of every single U.S. retailer on the Internet -- \$7.8 billion, according to Forrester Research, an Internet research firm -- you wouldn't even match the total of one business-to-business seller, Cisco Systems that says its Internet sales currently average more than \$8 billion per year.

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E-Commerce Perspective

Seventy-five percent of e-commerce transactions happen outside of the consumer's reach.

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E-commerce companies, while constantly adjusting to operating at lightning speeds to keep pace with Internet technologies, must reconcile themselves to the fact that their customers are living in what amounts to slow motion on the other end of the line. As a result, these businesses have to make difficult decisions about how to attract and keep customers within the limited bandwidth available.

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Successful E-Commerce Businesses

Ask the Builder

Cassette House

Coastal Tool & Supply

Discount Games

Expert Marketplace

FragranceNet

Gamesville

HorseNet

International Golf Outlet

iPrint

Ken Crane's Laser Discs

The Knot

KoreaLink

Long Island Hot Tubs

Motorcycle Online

Mountain Zone

Practical Online Weightloss
Clinic

Product Partners

Reel.com

Ridout Plastics

The Knot

Tradeshop

U.S. Wings

Weirton Steel

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E-Commerce Advise

The best piece of advice I could give any site is to remember that the Web is only a small part of a larger process of conducting business online. Without some type of ongoing outbound communication with people, either via an E-mail alert, regular appropriate participation in forums or discussion lists, or building a network of links from other sites, your site is more than likely doomed. Nobody cares that you have a website since everyone has one. Why should they go to any particular site? The answer lies in having a site that offers dynamic content that matters to them, and you remind them of that on a daily or weekly basis.

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E-Commerce Advise

A web site gets more traffic if it is frequently updated on a regular schedule. Repeat visitors learn to expect new information every 2 days. When I missed an update, traffic fell 20-30% and took a couple weeks before it returned to regular levels. Also, our newsletter which lists updates during the last week, results in about 1-2 extra page views/subscriber spread out over a period of 3 days (as people check their e-mail, finally get to read it and return to the site).

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E-Commerce Advise

Even though we are an Italian company, we decided to target Japan and the U.S. since Internet sales in Europe are still in their infancy. It's not an easy task to get business for a foreign company but we discovered something that significantly changed the ratio of visits to orders: testimonials. Put your customers' comments on your web page!

Carlo Botteon, La Gondola

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E-Commerce Advise

We were quick to realize the value of the most widely used application on the Internet -- E-mail. By producing a weekly newsletter with direct links to the latest buy and sell opportunities on our site, we increased our transaction volume two-fold. Targeted e-mail containing links back to your site is the most powerful demand generator.

Ross Mayfield, VP of Marketing, RateXchang

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E-Commerce Advise

Those who put a response form on their site receive many more inquiries than those asking people to just list an e-mail address. Keep the form simple and do not ask for redundant information. For example, if the response is going to be exclusively by e-mail, then don't ask for address, city, phone and fax.

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Electronic Commerce

Electronic commerce is more than just buying and selling goods over the Internet. Companies require a way to easily exchange standard business documents (such as a purchase order, invoice, or expense report).

Retailers need to create online catalogs according to a standard format that makes it easy for consumers to buy online. Firms that use enterprise applications need a standard way to move data between packaged apps like Oracle and SAP R/3.

Note the key word here: **standard**. If e-commerce is to proliferate, standards are surely needed.

A Guide for the Perplexed on E-Commerce Standards

Proposed Standard

What It Does

Commerce XML

cXML (Extendable Markup Language) is a set of DTDs (document type definitions) that will allow businesses to exchange common business documents in a standard format.

Ariba spearheaded creation of the proposed standard with input from Extricity Software, InterWorld, Ironside Technologies, POET Software, SAQQARA Systems, Sterling Commerce, Vignette, webMethods, etc.

BizTalk

BizTalk is a set of XML DTDs that will allow businesses to exchange common business documents in a standard format.

Microsoft is developing BizTalk DTDs with input from 1-800-Flowers, Active Software, barnesandnoble.com, Best Buy Company, Clarus, Commerce One, Concur Technologies, Dell Computer, DataChannel, Eddie Bauer, Emercis, Harbinger, J.D. Edwards & Co., Level 8 Systems, Oberon Software, PeopleSoft, SAP AG, SAQQARA Systems, Sharp Electronics, Sterling Commerce, Vitria Technology, webMethods, and other vendors and customers.