

# E-Commerce Components

## The 2<sup>nd</sup> Gold Rush

Stories about instant web millionaires dashed across headlines, brokers are entrusted college funds to Internet stocks, and Wall Street threw baskets of money at almost any business that mentioned the World Wide Web.

At first glance, it appeared that online commerce was a fail-safe way to make a fortune. After all, the masses continue to surf the Internet on a daily basis and online businesses are racking up millions of dollars in sales, right? With all the hype and excitement generated by advertisements and the mainstream media, it's no wonder why thousands of businesses have flocked unprepared to the world wide web to stake their claim under the guise of imminent success.

People are eager to listen to the reasons "why" they should be online, but whether it's a case of blurred vision brought on by euphoria or a simple lack of reasoning, few listen to the "how's" of Internet commerce.

Just pasting some text and scattering some photos on a page with a "cool" background is not going to cut it any more. Web surfers have become more sophisticated and less patient. Their expectations have increased and consumers continue to be cautious when it comes to shopping online.

## Design Is King

As with any brick and mortar storefront, you need to attract shoppers through elegant design, a clear presentation of products, and easy navigation. Your web site needs to build customer trust and loyalty by creating a comfortable and enjoyable online experience. To be truly effective, it takes a working balance of creativity and technical knowledge; an understanding of the Internet environment; and a keen awareness of user expectations.

If you solely consider design...you lose functionality. If you solely consider programming...you compromise imagination. The trick is to develop a web site with the perfect blend of creativity and technology to effectively achieve your online goals. P.L. Ruth certainly provides you with all the tools you need to create a store-front, in both functionality and design, but a commonly asked question is "what now?"

Although enhancing your business is the ultimate goal of your web site, if you don't design a site that makes an impact and keeps potential customers interested, your web site cannot succeed. Teaching you how to develop a killer web site is beyond the scope of this article, but here are some basic guidelines that you should consider when developing your web site.

**Keep your site up to date.** A site that never changes will fail to interest potential customers and it certainly won't inspire anyone to return.

**Make sure your site looks professional.** Your web site not only has to sell the product or service, but the company as well. In most cases, your web site is the only perception people have of your company. A shoddy web site or one littered with errors will cause people to leave in record speed.

**Keep the site simple.** Make it easy for people to find what they want. Design the site so that it "guides" them through each phase of the online shopping experience.

**Be careful with new bells and whistles.** While new technology is fun to look at, many potential customers won't be able to access your site, resulting in lost sales.

**Keep it navigable.** A poorly designed web site with dozens of buttons and scattered links can become a confusing maze that many customers will refuse to struggle with. Confused buyers can leave your site with a click of the mouse, so concentrate on providing easy-to-navigate pages.

**Organization is critical.** If your web site is database driven, it is imperative that your inventory is organized in such a way that products can be retrieved quickly and easily. Don't overwhelm your customers with dozens of choices or force them to wait for results. Make your products easy to find for both your customers and your database.

**Keep it clean.** Your pages should be simple and uncluttered. Throwing too much information at your customers will only confuse or irritate them. Provide some breathing room for their eyes and make sure your text is easy to read.

**Limit graphical content.** Little is more irritating than waiting three minutes for web pictures to load. Make sure your web site loads fast by compressing your graphics and limiting their use on a page. Try and keep your total page content to less than 60K if you want to stay within a typical surfer's threshold.

**Beware of browsers.** Many Internet users still employ older web browsers to surf the Internet, and there is no faster way to guarantee online failure than to make your web site inaccessible to the majority of the web audience. It makes no sense to design a site that only a select few can view, so make sure your e-store is open to the masses.

**Engage your customers.** The key to online success is not in traffic generation, but in maintaining viewership and ultimately inspiring people to return. If a site can generate traffic and convert a percentage of this traffic into revenue, then success is imminent. The way to do this is to have the visitor benefit even if he or she doesn't buy. Perhaps you can publish an electronic newsletter or provide online tips to establish yourself as an expert, something unique to your service.

**Open a line of communication.** Web customers are easily distracted and your site risks being forgotten if you don't stay in the forefront of your customer's mind. Some strategies to encourage communication include updated tips or information, an online inquiry form, a newsletter subscription area, surveys, chat forums or a frequently asked question section.

### **Understanding E-Commerce**

Your customer has searched and browsed your web site and has a shopping cart full of items to buy. How can you complete the transaction? The answer is the very essence of e-commerce. E-commerce is best defined as the online transfer of monies in exchange for the delivery of goods and services marketed via the Internet. While this sounds like an easy process, online marketers often have trouble determining what is needed to pursue e-commerce.

The way to determine what you need is as simple as looking at the buying cycle itself:

#### **What you want to accomplish**

Ability to sell products and/or services online.  
cart.  
Capture orders and keep track of customers.  
site.  
Accept credit cards as a form of payment.  
Process credit cards online and offline.  
Accept checks online and verify funds.

#### **What you need to accomplish it**

A web site, a web host, and a shopping  
cart.  
A database that can integrate with your  
site.  
A merchant account.  
A payment processor.  
Automatic check authorization.

Be able to get your money.

A bank account.

**Prepare for a long read below. Setting up Ecommerce is a long process with much to understand and many fees. Begin your journey below.**

### **The Components of E-commerce**

The focus here is on the implementation of e-commerce and taking away the confusion behind it. Aside from a web site, a shopping cart and a relational database, you essentially need four things to make your e-store a functional operation:

- A Web Host
- Site Security
- A Merchant Account
- A Payment Processor

It is probable that the web host, merchant account and payment processor will each be provided by three different vendors, so you have some shopping to do before you can complete your e-store. With so many choices available, searching for these components can be a daunting task. To help take the confusion out of your shopping trip, follow these basic guidelines to ensure that you not only get what you need, but that you get what you need at a fair price.

### **The Web Host**

Every storefront needs a location, but don't be hasty when selecting a web host for your web site. There are more than 2,000 companies vying for your business, so you can afford to be choosy. Moving a web site to another hosting company is often an expensive, risky and disrupting experience, so it is important that you make a solid selection before you open your doors.

**Plan before you commit.** Too many online merchants choose a web host before they even plan or design their web site. You need to estimate how much space you will need, how much traffic you expect to generate, what features you need installed on the server, and what kind of support you need from your hosting company to make it all come together. If you choose a web host that can't support certain technology, charges excessively for heavy traffic, or refuses to install necessary software, your site is doomed.

**Submit your requirements.** Jot down the kind of web hosting you need and e-mail the list to prospective companies. For example, if you require a secure NT server, unlimited e-mail, or 24-hour FTP access, tell them! Estimate how much space you need, tell them what database you use and provide some insight as to the purpose of your web site. Also attach a list of any questions you have about their services and ask about price, hidden fees, technical support and their willingness to install necessary programs.

**Analyze the responses.** This is where you can separate the good from the overloaded. Many won't respond to you in a timely manner and others won't respond at all. Be leery of these firms. If their customer service is poor now, imagine how it will be after you sign up. Of those that do reply, thank them for their fast response to encourage the same courtesy for others, and evaluate the responses.

**Look for experience, focus and capacity.** Hosting web sites is a complex business that requires technical experience and superior equipment. Make sure a prospective web host has the latest software installed as well as fast, reliable machines. Ask about security, power failures and guaranteed uptime plus backup and restore capabilities.

**How accessible is technical support?** Setting up your web site will involve considerable interaction

between you and your web host, so it is critical that you have quick and easy access to their customer service or technical support people. The more willing they are to work with you and ensure your satisfaction, the more restful your nights will be. You may want to avoid web hosts who provide support solely through e-mail. If you get in a bind, you may wait hours or days for a response.

**Inquire about connection speed.** Not only is it crucial that your web site be available 24-hours a day, customers must also be able to access it quickly. Inquire about CPU usage and traffic limitations.

**Ask for unrestricted administration access.** Some web hosts limit the number of site updates you can perform or limit the hours in which you can perform them. Choose a web host that allows unrestricted access to your web site, especially if you have an online store. You need to be able to manage your site's content, directories, folders and email accounts 24-hours a day.

**Rely on recommendations, but trust your instincts.** If you ask around, you will find plenty of people willing to recommend a web host. Put these recommendations through the same tests as all the others and find a web host that you feel most comfortable with. You will be working with your web host very closely over the next few months so it is important to get the relationship off to a good start. Ask questions, expect answers, and never settle for less than you need. Someone, somewhere will be able to meet your demands.

## Site Security

With all the media coverage about the dangers of using a credit card on the Internet, consumer apprehension continues to be a major obstacle for online web stores. For this reason, it is imperative that you not only secure your web site, but also make it known that you do.

Your customers need to feel secure with you, your product or service, your company and your security measures before they will freely give you their credit card information. While your site's design and functionality will help shape their perception of you, your product or service, and your company, it is your site's security that can very well make or break the sale.

When Netscape introduced SSL (secure-sockets layer) in 1995, it paved the way for online information security. SSL is essentially an encryption technology that scrambles a message so that only the intended recipient can read it. URL's that begin with "https://" are using SSL to protect information (think of the "s" as meaning "secure"). While SSL is not the only method available for providing secure transactions on the Internet, it is the most popular.

The introduction of SSL was a virtual gift to the e-commerce community because it dramatically reduced transaction risk and increased consumer confidence. Through SSL, a customer's information is only available to the intended merchant through an encrypted code; thus making the message useless to anyone who tries to intercept it.

To get SSL working, you will need a digital ID (also known as an authentication certificate) from a trusted third-party source. This certificate is like an online passport or driver's license. It's essentially a form of identification that confirms that you are who you say you are. Using your cousin Moe as a trusted third-party source won't cut it. The certificate must come from an industry-accepted firm such as Verisign ([www.verisign.com](http://www.verisign.com)).

Encryption is like a secret code that prevents others from reading your messages. The elements of an encryption system are the plaintext, the cryptographic algorithm, the key, and the ciphertext. The plaintext is the actual message or data that is to be encrypted. The cryptographic algorithm is a mathematical set of rules that defines how the plaintext is to be combined with a key. The key is a string of digits, and the ciphertext is the resulting encrypted message.

Here in detail are the steps taken during an SSL transaction:

The client sends a request for a document to be transmitted using the “https://” protocol.  
The server sends its certificate to the client.  
The client checks to see if the certificate is verified by a trusted source. If not, the user is given the opportunity to proceed or terminate the transaction.  
The client compares the information in the certificate with the information it received (the domain name and key). If this information is a match, the client accepts the site as authenticated.  
The client tells the server what ciphers, or encryption algorithms, it can communicate with.  
The server chooses the strongest common cipher and informs the client of its choice.  
The client generates a key using the agreed upon cipher.  
The client then encrypts the key and sends it to the server.  
The server receives the encrypted key and decrypts it.  
The client and server then use the key for the rest of the transaction.

To implement this kind of encryption technology, you need to enable SSL on your Web server. This typically costs more than standard web hosting, so you may want to ask your web host about the fees associated with a secure connection.

As you can see from the above example, securing information through SSL takes time. To make sure that your pages load quickly, don’t host your entire web site with this technology. Instead, host only the “order center” function of your web site with SSL protection. A good rule of thumb is to operate over a secure connection from the time your customer wants to “check out” to the time the order is confirmed.

SSL does come with a catch. Even if your web server supports SSL, it will only work with SSL-friendly browsers. While most browsers do support SSL, some older versions do not. To accommodate those who cannot place an order via a secure connection, you may want to allow for unsecured orders, although this is not recommended.

Speak with your web host about setting up SSL and establishing a digital ID. Many can help you every step of the way and most will show you how to get it installed and configured. Once you have SSL in place, you’re almost in business.

### **The Merchant Account**

For many web merchants, finding the best way to accept payments is a confusing and frustrating task. Because the Internet is an instant medium, it is highly recommended that your site accept credit cards and online checks as forms of payment.

Before you can accept credit card transactions, you will first need to set up a merchant account with a merchant bank. This is not a complicated process and almost any merchant account provider you choose will be more than happy to assist you. You do NOT need to buy one of the numerous “manuals” that claim to guide you through the process. Your toughest job will be finding the best deal out there, and these guidelines should help you accomplish this.

Merchant status requires that you deal with a sponsoring bank to help capture and deposit your funds. You do not have to go to your own bank for a merchant account. In fact, many web merchants find that their banks either won’t help them or impose outrageous fees. If this is the case, you can find

several merchant account providers by searching the Internet.

Whether you use your bank or an agency that represents one, the game is played the same. Fees, hidden charges, and unexpected costs will swallow you whole if you aren't careful. Unfortunately, when some merchant account providers sense an Internet "newbie", they are less than open about the charges you can expect.

Be very careful about companies that demand you purchase or lease equipment as they are often sold at 4-5 times market value. If you have limited credit or are just starting out in business, do not let agents take advantage of your situation. Most agents work on commission and therefore do not look out for your best interests. In most cases, all you will need is a merchant account number. From there, an online processor can provide you with the software or gateway you need.

Here are some other fees and charges you may or may not be told about when applying for a merchant account. Refer to this list and ask about each of these items before agreeing to an account.

### **Application Fee**

This is a charge imposed so that an agent or bank can "research" you as a potential customer. Some firms refund this fee if you are not accepted while others keep it for their trouble. You should never have to pay an application fee that is not refunded to you if you are turned down. Conversely, be cautious of those that waive the application fee but make up the difference in unnecessary equipment or other charges. Expect to pay up to \$150 for an application fee.

### **Installation or Programming Fee**

There should be none, but if your account requires special equipment or software, there may be a nominal fee for establishing your account. If you will be accepting orders solely through the Internet, mail order or via the telephone, you will not need a card swipe machine. Instead, your payment processing company should be able to provide you with software to use with your computer and printer to conduct transactions.

### **Minimum Account Billing**

This is a reasonable fee that requires you do a minimum amount of business each month. Many banks require a monthly minimum of at least \$50.00 in transaction fees. This means that even if you don't sell anything in a given month, you will still be assessed the \$50.00 minimum. Anything less than a \$50.00 minimum should be considered acceptable, but look to spend no more than \$25.00 as a minimum.

### **Statement Fee**

If there is a substantial minimum-billing requirement, then there should be no statement fee. However, many banks do charge this to cover administration costs. If you are assessed a statement fee, it shouldn't exceed \$10.00 per month.

### **Chargeback Fee**

If a customer is unsatisfied with his or her purchase, can't get a refund or is just looking for a free ride, you may be faced with a chargeback attempt. A successful chargeback will result in the bank returning the customer's funds and debiting your account for the full amount, often with a chargeback penalty of \$15 to \$25. Be sure to ask about your bank's chargeback policy. Banks tend to be more loyal to cardholders than merchants so try and protect yourself by eliminating chargeback fees.

### **Discount Points**

This is an inevitable merchant account fee that is assessed on every transaction. Typically this fee is equal to about 2% to 2.5% of the purchase. If a product costs \$100, the bank would receive \$2.00 to \$2.50 for their service. While rates are dependent on the nature of your business, anticipated volume, and your credit history, you should never pay more than 3%. If you are an established business with considerable volume and good credit, then you should never pay more than 2%. The exception to the rule is the use of American Express or Discover cards where the discount points may be higher.

### **Transaction Fee**

This is another inevitable transaction fee where you pay anywhere from \$.20 to \$.30 per order to process the credit card. While considered a reasonable fee, it shouldn't exceed \$.35 per transaction. In fact, you should try and secure a transaction fee of \$.20 per transaction, but this may be difficult if you are an unestablished Internet business.

### **Set-Up Fee**

This is another reasonable fee that covers the administrative work necessary to establish your account. If you face an Installation or Programming Fee, there really shouldn't be a set-up fee. There is a considerable amount of work completed to set up your merchant account, so the fee should be expected. The set-up fee can range anywhere from \$50 to \$500, but you shouldn't have to pay more than \$250.

Even when armed with this information, obtaining a merchant account can still be a confusing process. Searching the Internet for merchant account providers will return thousands of sites hungry for your business. Most claim to provide the world to you for next to nothing and others are blatant fourth-party webmasters looking for a referral commission. You are advised to deal direct with merchant account vendors or ask other webmasters which firm they used to establish a merchant account.

Regardless of the bank you choose to approach for a merchant account, you can expect a review of your business to determine if you are merchant-worthy. *There is usually a 7-10 day application process and often a physical site check to verify that you even run a business. Don't panic if you work from home, it has become common for banks to deal with home-based businesses.* Lavish offices aren't expected or required.

When approaching banks or third-party representatives about a merchant account, here are some considerations to keep in mind throughout the process to make sure you are securing the best relationship possible.

Prepare a strong, well thought out business plan. Unless your credit history and assets are golden, just telling the bank what you sell will not be acceptable. While a complete business plan is probably unnecessary, your sales projections and inventory details may need to be presented in an organized fashion.

Shop around for the best deal. Some providers charge less than \$300 to establish a merchant account while others charge up to \$1,500 for the same amount of work. Unless there are several value-added features that separate the more expensive from the reasonably priced, take your time

to research different companies.

Read and understand the terms, conditions and anticipated charges carefully. Don't sign anything until all of your questions are answered to your satisfaction. Take time to know exactly what you are getting and how much you are paying to get it.

Make sure the bank or provider has customer service available. Is there a toll-free number to use? Is a reserve account required? There should be none, but if you are a start-up Internet business, have poor to marginal credit, anticipate low volumes, or run a "risk" business, you may be required to establish one.

How long does it take for funds to be available to you? This shouldn't be more than 72 hours from the time an order or transaction is settled.

Is special equipment, leased lines or expensive software required? Be leery of companies that require the purchase or lease of equipment, especially if you are an Internet-only business. Locking into a 3-5 year lease leaves you with no alternatives and a long-term, expensive commitment.

- 1) Read the fine print...twice. Many web merchants have been burned by sudden rate increases and fee assessments. Preferably, get your rates in writing and ask for a contracted time that those rates will remain fixed.
- 2) Most online payment processors (companies that verify funds and complete transactions) will provide you with the software you need to accept, process and maintain credit card orders. If so, you will only need to furnish your online processor with your merchant number. In this situation, any equipment or software you buy or lease from your merchant account company would be unnecessary.
- 3) Be persistent. When shopping for a merchant account, look for a deal that best fits your business. Merchant account agents need you more than you need them, so don't be coerced into outrageous fees or requirements. Taking the time to find the right company for your business will pay off in time, money and peace of mind.

### **The Payment Processor**

Because most of your e-store orders will take place with a credit card, it may be important for you to understand the nature of an online transaction. Behind the scenes, credit card transactions are fairly complex. In every transaction, there are multiple independent groups participating, including the online merchant, the customer, your bank, the bank that issued the credit card and the online processor or clearinghouse that manages the whole mess.

Before your customers' money can make it into your bank account, there are a series of steps a transaction must go through, including:

**Authentication** – Verifies that the credit card has valid numbers, has been officially issued, and has not been reported stolen.

**Authorization** – Checks to make sure adequate funds are available to make the purchase. If they are, the funds are "reserved" or "parked" for you.

**Settlement** – Once you have shipped the products or completed the service, you will need to let the banks know so they can release the parked or reserved funds to your bank.

The big issue with credit card sales is that you most likely cannot actually debit a customer's card unless you will be shipping the product or completing the service within 48 hours. Even though the card may be approved and the funds reserved, you may not be able to "settle" the account until you have completed the fulfillment process. Your online processor can help you with this, so be sure to ask about batch processing and the releasing of funds.

Having a merchant account is not enough. All a merchant account does is enable you to accept credit cards. To process these cards, you will need a payment processor or transaction service. Also known as “gateways”, these organizations make the wheels of e-commerce go ‘round. As an Internet business, you have two options with regard to accepting and processing credit cards, Manual or Automatic Processing (Real-Time Credit Card Verification).

### **Manual Processing**

If you anticipate low initial volumes or want complete control over credit card processing, you may want to consider manually processing the credit cards. In this scenario, you would receive an order via a secure connection (SSL) complete with credit card information. It is advised that you design your site so it notifies you of an order, but does not transmit credit card information by email. This enables you to capture orders and place them in an “Orders” database for easy retrieval over a secure connection. It also protects your customers and also helps keep your order history in order.

If you want to manually process cards, talk to your payment processor about the methods involved. Most companies will provide you with the software you need to process cards manually. Remember that expensive equipment or swipe machines are not necessary if you will never be face to face with customers.

### **Automatic Processing (Real-Time Credit Card Verification)**

Automatic Processing is a great time saver for web merchants who don’t want to mess with hand entering credit card information one order at a time. While manual entry is great for merchants with low volumes, it can get cumbersome if orders start rolling in. With Automatic Processing, your web site works with your payment processor to verify the card and complete the transaction. You are only notified of successful orders thereby saving valuable time.

When your customer fills out an order form and enters his or her credit card information, the information is then sent via a secure connection (SSL) to your payment processor or transaction service. Your processor will send a secure message to the bank that issued the card to the consumer to verify that sufficient credit is available to make the purchase. In addition, the processor will verify that the account is active and that the card is not reported stolen. Some processors have other fraud-detection safeguards in place, so be sure to ask about available security features.

Once a transaction is authorized, the issuing bank will send your processor an authorization for the funds and reserve the monies. Your web site will then be notified of the approval so you can accept and process the order. You may want to consider forwarding your customer to a confirmation page to thank them for their order and acknowledge that it has been received. If a customer’s credit card is not approved, your web site will be notified so you can redirect them to an “Order Failed” page.

Whether you use manual or automatic credit card verification, the work done by the payment processor is essentially the same. The main difference is that you are transmitting the credit card information instead of your web site. Determine which method is best for your business.

Just as you incur fees with a merchant account, you incur fees through your online processor. The fee structure is almost identical, but the procedure is much easier. There is no substantial “review” of you or your business, nor should there be any application fees.

When looking for a payment processor, try and find one that can also support electronic check payments. This will enable you to accept funds via check without having to wait for the check to arrive in the mail. Similar in procedure to credit card verification, the customer’s bank is accessed to make sure the funds are available. Through an automated clearinghouse, the funds are then made available to you. This is a great feature for web merchants as it opens your site to those who either

don't have a credit card or are too afraid to use one online.

The fee structure is similar to a merchant account, but there are still some guidelines to follow to make sure you get the best deal possible.

### **Activation/Set-Up Fee**

There is a considerable amount of work performed to establish your account, so expect to pay a set-up fee. Payment processors typically charge anywhere from \$200 to \$500 to establish an account. Any more than this and you need to keep shopping.

### **Monthly Statement Fee**

There shouldn't be a monthly statement fee as many provide online details, but if there is a monthly statement fee, don't pay more than \$10.00 per month...especially if you are required to pay a monthly service fee.

### **Credit Card Transaction Fee**

This is an expected and usually fair expense. It costs time and money to process your orders, and the service these companies provide is critical to your business. Still, you shouldn't pay any more than \$1.00 to process a credit card order. Most processing companies will charge anywhere from \$.60 to \$.80 a transaction and there should never be an additional percentage fee assessed (similar to a merchant account's "discount points").

### **Check Processing Transaction Fee**

Typically, the fees for check verification range from \$1.00 to \$2.00 per transaction or a set percentage of the sale (don't pay both). Check with your online processor to make sure it's available and to discuss how to integrate it with your web site. While the transaction fee is higher than with credit cards, you do avoid merchant account charges with this method.

### **Monthly Minimum/Service Fee**

Most online processors will require a monthly minimum or charge a flat monthly fee. If, for example, the monthly minimum is \$30 in transaction fees and you have a bad month where not one widget was sold, you will still be assessed the \$30 minimum. Don't accept a monthly minimum in excess of \$50.00 unless you are getting a mammoth amount of value-added features and services.

Keep in mind that merchant account fees and payment processing fees are both incurred when conducting a transaction. Perhaps an example will help demonstrate.

You sell widgets for \$100.00 each. A customer purchases two widgets for a total of \$200.00. Once the customer's credit card is verified and approved, the following cycle occurs:

Your merchant bank collects 2% as its discount points and \$.25 as the transaction fee for a total of \$4.25. Your payment processor collects \$.75 for completing the transaction, and you retain \$195.00. Obviously, the rates can differ depending on the merchant, but in this example, you paid \$5.00 for the advantage of accepting credit cards as a method of payment. While it may seem like a lot, odds are the sale would never have been made without it.

There you have it. All the components you need to pursue e-commerce. While it may seem intimidating at first, you will find the process to be easy once you are armed with this information. The best advice is to be patient and look for the deal that fits your budget and your business needs. You have endless options, the key is finding the one that integrates seamlessly with your web site.