Chapter 11

Adding Mobile Commerce

In This Chapter
▶ Looking at how users adapt to mobile commerce
▶ Understanding the m-commerce basic building blocks
▶ Comparing m-commerce solutions
▶ Setting up commerce on a mobile site

Cellphone enthusiasts predict the day when your wallet, keys, and phone will all join together as the smartphones of the future fulfill all those functions in one. Outside James Bond movies, phones aren’t quite magical open-sesame devices yet, but increasingly, they’re turning into digital wallets.

For instance, cellphones are already taking on the functions of portable, virtual ATMs and credit-card processing devices. In Japan, commuters pay their subway fares by swiping their phones over sensors on turnstile gates, and use them to buy snacks and drinks from vending machines or convenience stores. Workers in the Middle East are paid via credits sent to their mobile phone accounts, which they can then transfer easily to their families in other countries. And in Los Angeles, street vendors are using iPhones to process credit cards for the lunch crowd.

Setting up a system that turns phones into offshore bank accounts is a task far beyond the scope of this book, but it demonstrates how quickly mobile is changing everything about commerce. For our purposes, let’s define e-commerce as any kind of transaction that occurs via the Internet that involves money being transferred from one person, business, or organization to another. The transaction can be as simple as a teenager buying a 99 cent song on iTunes, or as complex as millions of donors around the world clicking a button to donate money in dozens of currencies to an international charity like the Red Cross.

M-commerce is essentially a subset of e-commerce, in that they both depend on the Internet to make the money go from one account to another. But what makes m-commerce different is that it can happen anywhere, not just in offices or on home computers. With m-commerce, people can take all kinds of actions involving money, such as transferring payments from bank accounts to mobile phones, from phones to bank accounts, and even from phones to phones.
In this chapter, we explore how mobile phones and other devices are increasingly used to sell things and transfer money, and we tackle how to set up your mobile Web site so that your users can buy your products and services, subscribe to your news feed, or pay to download digital goods, such as songs and videos.

Looking at How Users Adapt to Mobile Commerce

The advantages of having mobile commerce (or m-commerce) on your site seem, at first glance, rather esoteric. More than ten years passed before people felt comfortable buying and paying for items on their computers at home (and in the office, when the boss doesn’t catch you on eBay). And still people tell scary stories about buying things online and then having their credit card numbers and identities stolen. Doing this over a phone, when (theoretically, at least) thieves can intercept radio signals, would seem to be a step further than most people are comfortable with.

And yet, the market indicates that m-commerce is growing rapidly:

✓ Retailers reported that sales to people using mobile phones were up 300 percent over Christmas 2009, and that people weren’t just buying trinkets. Shoppers bought sailboats and Corvette sports cars for hundreds of thousands of dollars, using their phones to complete the transaction. Major chains, such as Pizza Hut, rolled out sites and apps that let you custom-build your pizza, type in the address you want it sent to, and pay for it from your phone.

✓ The worldwide market for m-commerce will hit about $120 billion by 2015, according to ABI Research.

✓ M-commerce growth in the United States has been stunning: mobile shoppers spent $396 million in 2008, tripling to $1.2 billion in 2009.

✓ More than half of shoppers now use their phones to check prices in stores.

✓ Nearly one in five shoppers in the crucial 18- to 24-year-old demographic has used a phone to buy products.

The advantage of m-commerce is that your customers can impulse-buy wherever they are, whenever the urge hits them. Your job as a Web developer is to make that process as safe and as smooth as possible so that they don’t think twice or feel creeped-out and abandon ship before they hit the Confirm Purchase button. Think of m-commerce as the equivalent of having operators standing by to take your order; the only differences are that these operators never sleep or take breaks, and after you go through the expense of setting them up properly, they just keep working.
Understanding the Basic Building Blocks of an M-Commerce Solution

Whether you sell just one thing or have a site chock-full of thousands of items of all shapes, sizes, and prices, each store must have some of the same elements. The following sections guide you through the basics of how online commerce services (both for mobile and for the desktop Web) work so that you can better understand your options. We also tell you what to look for when you design a shopping system for your Web-based business.

Creating a mobile shopping experience: The front end

This front end of your site is where your customers shop and pick out what they want to buy. Whether you sell one item with a simple Buy Now button or you design a sophisticated shopping cart, think of your m-commerce site as your virtual showroom.

Just like in traditional brick-and-mortar stores, your goods in your mobile store need to be displayed in a logical, attractive manner, and your store needs to be laid out in a way that’s clean and easy to navigate.

Everyone has wandered through a warehouse-style store at some point: You can easily get lost, the prices aren’t always marked clearly, and no one’s around to help you when you need them. Few things cost you more sales online than getting your customers lost in a sea of poorly organized links. You also don’t want visitors to question your credibility because they feel they’ve wandered into a crummy junk shop with the merchandise piled in heaps. Even if they find something they like, they can’t wait to get out. Remember: Design is about making the site attractive and easy to use.

Imagining your target customers

One of the most valuable things you can do before creating your store is to step back for a second and imagine your target customers (the people most likely to spend money on your products). Don’t just try to visualize who your target customers are — put yourself in their shoes. Where are they, and what are they doing when they come to your site on a cellphone? Anyone who’s going to spend money while browsing a store on their mobile device is probably in one of five situations:
They’re looking for a special deal while they’re out and about. For example, a couple on a date just found out that the restaurant they planned on eating at is closed and the movie they wanted to watch is sold out. Now they just want to order some takeout, go home, and snuggle in front of the TV. So they do a GPS-enabled search and find that your place is within two blocks and will have their food waiting by the time they arrive.

They’re in a critical situation. They absolutely need to buy your product and close the deal as soon as possible. For example, a diehard sports fan just got your text alert that a whole section of seats to the Super Bowl just opened. However, the tickets are going fast and probably will be gone by the time she can rush home — unless she places a bid on your site right this instant via her mobile phone.

They’re impulse shopping. Maybe they’ve trudged through snowdrifts past your billboard advertising tropical cruises for the last month. Today, the bus splashed them with a wave of freezing slush and muck. Shivering in their seats, they pull out their phones and punch in your travel agency’s Web address.

They’re in-store bargain-hunters. Retailers are starting to notice that shoppers are whipping out their mobile phones and punching in product names and details to make sure that they’re getting the best deal.

They’re bored and killing time. A group of 15 year olds decides to see what the new super-exclusive designer sneakers you just got in look like and how many chores they may have to do to earn themselves a new pair.

In each case, immediacy is one of the driving factors behind customers making a purchase with their phones. People buy things for all sorts of reasons, but when it comes to m-commerce, a lot boils down to just being in the right place, at the right time, with the right offer.

Following mobile design do’s and don’ts

What makes m-commerce so exciting is that the mobile Web puts your store in your customer’s pocket wherever they go. Before you get too excited by visions of round-the-clock shoppers, here are a few deadly design errors you need to avoid:

Don’t cram too many things on your page. The screen size is small, and even if you have hundreds of things you want to offer, if you try to put them all in one space, your customers can’t figure out what they’re supposed to click.

Don’t use gimmicks, such as hokey animations and music to try to grab users’ attention. If they’ve made the effort to hit your mobile site, they’re already interested. But they’re also skittish — mobile shopping is still a new experience for most people. If your site looks like a 13-year-old girl’s MySpace page, they’re probably not going to trust that their financial information is safe with you.
Don’t get cute and hide the prices from people. Maybe your mobile customer is running up stairs, rushing into a meeting, or stopped at a traffic light. If they have to go through the whole checkout process only to find that your price isn’t what they thought it was, they may never come back.

Guide customers, with just a few options per screen, until they’re ready to make a buying decision. Mobile commerce in Japan is years ahead of the rest of the world; the online shopping site Rakuten is a particularly good example of how good mobile Web design can boost sales and profits. By designing for the mobile Web, they encouraged millions of users to shop using their mobile phones — and made hundreds of millions of dollars in profit.

The differences between the desktop experience and the mobile Web experience come into sharp focus when you look at how Rakuten appears when you navigate to the regular desktop site on a smartphone, as shown on the left side of Figure 11-1. Note how tiny the icons all look, how they all seem jumbled together, and how you can’t really read any of the links. On the right of Figure 11-1 is Rakuten’s site, as it appears when you go to the version that is optimized for the mobile platform. Note how having fewer choices (even if you can’t read Japanese) makes it easier to figure out where you’re supposed to click.

Understanding your shopping cart needs

After your customers see your showroom and click through to read more detailed descriptions of your merchandise, you want to give them a shopping cart to put the stuff into. Why? Well, if you only allow people to buy one thing at a time, chances are they will buy only one thing and then leave.

If all you want to do is sell one thing at a time, add a PayPal Buy button or a simple Google Checkout Buy Now button and then you’re done. You can find
instructions in the “Creating a simple PayPal Buy button” section later in this chapter. The steps for adding a Buy Now button with Google Checkout are very similar to the steps for PayPal.

If you want to sell more than one item, you need a shopping cart that allows your customers to add and remove items while they move through your site’s pages. Google and PayPal also offer a simple shopping cart solution that makes it easy to add these services with a minimal investment of time and no upfront costs. (See the section “Creating a simple shopping cart with Google Checkout,” later in this chapter. The steps for adding a PayPal shopping cart are similar to Google Checkout.)

If you want a more sophisticated solution, consider one of the more advanced m-commerce options described in the “Comparing Mobile Commerce Solutions” section later in this chapter.

At the high end of these services, you’ll find sophisticated options, such as shopping carts that integrate with existing inventory systems and features that allow customers to make comparisons among products, set up bridal registries, view recommendations, and more. To see a list of options across all these levels, read the section “Comparing Mobile Commerce Solutions.” To read about more of the things you need to consider when choosing a shopping cart, see the sidebar “What to consider when choosing an m-commerce solution,” later in this chapter.

**Exchanging money with a checkout system**

If everything else goes well, you ultimately guide your shoppers to the checkout: The place where the key action — money comes out of their accounts and goes into yours — happens. As you might expect by now, this is also where most of the second thoughts (or cart abandonment) happen. If you’ve designed your site well, you will overcome your customer’s initial reservation to make a purchase and close the sale.

Your checkout must be as smooth and frictionless as possible; studies show that every 15 seconds of delay increase the chances of cart abandonment by as much as 25 percent. That is, if a whole minute passes for a mobile user (who moves around and has a short attention span) to get a response after clicking the Pay Now button, the odds of him just chucking the whole process approach 100 percent.

If your customers don’t see what’s happening, their fear overcomes their desire. You must not only use Internet-based security measures that use Secure Sockets Layer (SSL) technology (see the section “Securing transactions with your customers”), but also prominently reassure your customers that their financial information won’t get stolen or misused. Nobody wants to risk a virtual credit card thief buying a pallet of yak vitamins just to buy a vintage concert T-shirt. We discuss this in a little more depth in the upcoming sections that discuss the back end of a site.
A good checkout system needs to

✓ Total the cost of all the items in the potential customer’s shopping cart including any tax and shipping costs.

✓ Allow the customer to choose shipping options. Customers like shipping options — FedEx, delivery vans, in-store pickup, friendly kayakers, whatever.

✓ Send the customer tracking information and a confirmation e-mail. Pay attention to that confirmation e-mail because it’s a great way to entice customers to come back and shop again, rate their transaction efficiency, or receive discounts by referring their friends.

Do some research. Go to your competitor’s online stores and go through the buying process on as many mobile phones as you can get your hands on. Go to big online sites that have invested millions in perfecting the shopping experience, such as Amazon, eBay, Dell, and so on, and ask yourself questions every step of the way. Do you like the way the product’s pictures are displayed and how the ad copy is written? What can you do better? What do you need to include? Take careful notes. If you start out armed with a clear vision of what you want and how you want to do it, you have a much better chance of coming out with a store that you like.

Amazon’s shopping cart, shown in Figure 11-2, is a good model. This cart has both a large image of the item and a link to more images. The price is prominently displayed with a link to immediately check out and pay. And at the bottom of the cart is a suggestion to try to sell the customer some other items that go nicely with their selection. All the links are clear and easily understood, and the navigation at the bottom of the screen is unobtrusive.

Figure 11-2:
Amazon’s shopping cart.
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Working behind the scenes: The back end

Broadly speaking, the back end of your m-commerce site includes all the things that your customers don’t see. Think of this as your stockroom where you store all your stuff on shelves, next to filing cabinets and order sheets. You use the back-end features of your m-commerce solution to:

- Enter product and pricing information
- Manage shipping and tax options
- Configure any other features provided by the m-commerce service you use

The back end of your m-commerce site also has to integrate smoothly with your payment solution. If you choose a service like the Google Merchant (which is part of Google Checkout), you get everything you need in one easy package. If you want a more customizable shopping cart that offers mobile services, consider Magento (www.magento.com), but keep in mind that you have to integrate the cart features with a transaction service yourself (see the section “Comparing Mobile Commerce Solutions” for more on this option).

Google and PayPal offer many levels of service, so you can use Google or PayPal as an all-in-one solution for simple shopping sites, or you can use Google or PayPal just to handle the transactions if you use a more sophisticated shopping cart, such as Zen Cart, for the front end.

Securing transactions with your customers

Not to sound like a broken record, but security is one of the biggest hurdles m-commerce has to clear. Your customers watch TV ads about having their identities and credit card numbers stolen (particularly the ones that show little old ladies chortling in some gruff man’s voice, bragging about all the expensive stuff he scammed by stealing granny’s identity).

Here are the three main goals of security:

- **Protect your customer:** Customers who don’t get robbed are much more likely to come back . . . and still have money in their pockets when they arrive.
- **Protect the merchant:** You want to keep your site from being used to launder money or having all your products drop-shipped to a P.O. Box in some prince’s name.
- **Protect yourself:** If you’re a Web designer creating m-commerce sites for clients, you don’t want an angry customer coming after you with a lawsuit because someone hacked the system you designed.
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If you’re a designer and don’t take security seriously, there could be legal ramifications. If credit card numbers and personal identities are stolen, expensive lawsuits could result. Depending on the kinds of contracts you develop with clients, you may be liable. Consult an attorney for the best way to protect your business and consider investing in a business insurance policy that covers online commerce.

The standard technology to protect transactions is Secure Sockets Layer (SSL). All the information sent between a computer or mobile phone and the payment site is encrypted. Options range from 128- to 256-bit encryption, but 128-bit is more than enough for most businesses. Banks and brokerage houses that transfer billions of dollars around the world use 256-bit security, but they pay a high price for that level of security, as well as the bandwidth and computing power that go along with a site built to securely manage such high-end services.

Think of mobile security this way: You don’t need to hire a helicopter gunship to hover over your business to fend off robbers, but an alarm system and a good insurance policy are well worth the expense. Be safe, but not so paranoid you blow all your potential profits on security.

Inventory tracking and adjustment

The process of tracking and controlling inventory is something you’re probably familiar with in the brick-and-mortar world, but in m-commerce, the process can get tricky. Here are some of the essential inventory functions to any good m-commerce system:

- You can add new products and services easily.
- You can adjust prices easily and have those adjustments applied globally to any mention of the same product.
- You can take things off the virtual shelves if you run out or need to do a recall for some reason. Make sure you can do this quickly and efficiently before you need to do so urgently. If you depend on a third-party solution to create and manage your online store, you may have to have someone else do this for you and you may not be able to control how long it takes them to get around to it.
- You get good records and can track the ups and downs in your inventory sales so you can figure out when to raise or lower prices or order more products from your suppliers.
- You have customer relationship management (CRM) features. A good CRM system tracks what your customers looked at, what they added to their shopping carts, and what they actually checked out and paid for, and then follows up and asks the customers how they felt about what they bought and allows them to write (hopefully glowing) reviews about you. Depending on how elaborate you want to get, and what your sales volume looks like, these services can get expensive. But when you can
track what each customer buys and how they felt about it, you can start doing things (such as recommending related products and services) that can really increase sales.

Calculating taxes, shipping, and handling
After your customers buy your goods, the back end of your system needs some way of getting that merchandise to them. Whether you offer digital downloads, package your products in bubble wrap and cardboard boxes, or use a pizza delivery scooter, make sure it’s clear to your customers what, if anything, you’re charging them for delivery. If you offer multiple choices, such as rush services, make sure the m-commerce service you choose includes features to handle different shipping options (some are directly connected to common services, such as UPS and FedEx, to make things even easier).

Another charge that you need to be able to track and record is the amount of sales taxes you collect. Trust me, if you ignore this step, your accountant (not to mention the IRS) will have some very interesting things to say to you. And charging taxes isn’t as easy as you might think because in most cases, you only need to charge taxes from those who live in your same state, and depending on your state, those taxes may vary from county to county. This can get complicated fast, and to ensure you’re in compliance in your state, check your state business and sales tax requirements.

What to consider when choosing an m-commerce solution

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<th>What to consider when choosing an m-commerce solution</th>
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<tr>
<td>There are a lot of factors that should go into choosing which m-commerce solution is best for your business, some of which may not have occurred to you. While we can’t possibly anticipate all the needs of your business, the following are some questions you should answer for yourself; having a clear picture in your head of what is important can help you sort through the dizzying array of options in m-commerce solutions.</td>
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<tr>
<td>Keep in mind you may be responsible for not only your data but the data and security of your customers.</td>
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<tr>
<td>✓ How secure is the service against hacking, viruses, fraudulent transactions, and data corruption?</td>
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<td>✓ What’s the process and cost for rebuilding a store if your data becomes corrupted?</td>
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<td>✓ Can you install, set up, customize, and administer the store yourself or do you need to hire a Web designer, programmer, or e-commerce specialist to help you?</td>
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<tr>
<td>✓ Is the store scalable? Can you add as many products as you like or is there a limit?</td>
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<tr>
<td>✓ How many customers can the system manage at a time? How does the service manage spikes in traffic?</td>
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</table>
Can you easily import your current data into the system and then export your data at a later time?

Does the software have application programming interfaces (APIs) that link to your legacy applications for inventory management and financial records? Will the software interface with the popular content management systems (CMS) or CRM?

Does the store include a virtual shopping cart that allows online shoppers to browse through your store’s inventory as well as add or remove items before logging in or checking out and paying for the items?

Does the service handle all the different kinds of products, services, and digital goods you want to sell?

Does the service support automatic recurring subscription payments? This is important if, say, you want to charge a monthly fee and automatically bill customers each month.

Can you organize your products the way you want them within the shopping cart system? For example, can you group your products into categories and subcategories?

What payment types (MasterCard, Visa, American Express, and so on) does the service support? Can you set up the system to work with your bank directly, if you prefer to use a particular payment gateway or payment processing service?

Does the service support automatic repeat ordering? This is important if you have customers who order the same items each week or every few months, such as a subscription service.

Does the service allow you to add or remove items from your inventory as needed, such as when new items arrive or old ones sell out?

What are the options to administer your store, such as processing orders, analyzing sales, and modifying inventory? Some e-commerce platforms offer Web browser access whereas others may require separate software on each computer.

What are the options to customize your store, such as processing orders, analyzing sales, and modifying inventory? Some e-commerce platforms offer Web browser access whereas others may require separate software on each computer.

What are the options to add or remove items from your inventory as needed, such as when new items arrive or old ones sell out?

How popular is the software, and is it time-tested or is it a new product with no history?

Can you generate detailed reports of customer activity, inventory levels, and other data?

Does the store support social networking and customer product reviews?

What are the options to personalize your store, and can you easily create and edit your own store look and feel?

Can you modify the visual look of your store with customizable templates, and what additional software features are available?

Can you generate detailed reports of customer activity, inventory levels, and other data?

What are the options to personalize your store, and can you easily create and edit your own store look and feel?
Comparing Mobile Commerce Solutions

When adding shopping carts and other e-commerce services to your mobile site, you can choose from many options. Many familiar brands, such as PayPal and Google, have made major efforts to migrate their online commerce technology to the mobile platform. And a crop of new companies are emerging, with dedicated mobile services that include everything from m-commerce to short messaging service (SMS, also known as text-messaging), mobile coupons, and other mobile features.

Choosing from four main flavors of mobile commerce solutions

With mobile commerce, you have a wide range of options. The following helps you appreciate the four main ways you can add m-commerce to your site, each with its own pros and cons:

✓ A Buy button or simple shopping cart: Google and PayPal offer one-click Buy buttons that make it easy to add the ability to sell one product, service, or digital good, such as a subscription or e-book, to your Web site.

  • Pros: You can complete this task in a few minutes and there are no upfront costs. Plus, everything you need is in one package, so you don’t have to worry about setting up credit card processing or other transaction services.

  • Cons: You can sell only one item at a time, there are no shopping cart features, and you have few options about the way this button looks on your site.

✓ A wide range of shopping carts combine mobile features with a payment service: At the low end, Google and PayPal (see Figure 11-3) offer simple shopping carts in an all-in-one package. More sophisticated Web-based shopping carts, including Magento (www.magento.com), offer robust features but they come at a price, and not just in upfront costs and transaction fees. High-end shopping cart services can be complex to install and set up, but if you sell a lot of items, or need your online system to be integrated with your brick-and-mortar inventory system, you may find them well worth the cost. Dedicated shopping carts also require a separate transaction service to handle payment processing. For this part of the process you can use the transaction services provided by Google or PayPal. You may also be able to handle transaction processing with your own bank if it offers these kinds of merchant services.

  • Pros: You can better control how your merchandise is displayed, manage more products more easily, and even integrate online and
offline inventory management. Some shopping cart services offer added features to help manage customers, product discounts, coupons, and so on.

- **Cons:** Using a shopping cart service requires considerable work to set up the software on your server and integrate it with your Web site. These services are also more expensive and generally only worth the added cost and effort if you sell at least a dozen products.

**Dedicated mobile shopping carts:** A growing list of shopping carts and m-commerce services are designed specifically to work on the mobile Web. Some of the newest m-commerce companies are set up to do all the work for you; others offer shopping carts you can design or customize and build into your site yourself.

- **Pros:** Designed from the start for the mobile platform, you can expect companies such as asknet (www.asknet.com) and mPoria (www.mporia.com) to provide solid support for mobile devices and understand the unique challenges of the mobile Web.
- **Cons:** This is an exciting area of the mobile Web, but like any new technology, you won't find much history behind some of these companies, so it can be harder to compare customer reviews or find third-party help or tech support.

**A completely custom-built cart with your own back end:** This is for the intrepid mobile Web designer only. If you want complete control over the look and functionality of your m-commerce site, as well as control over how the checkout and money-transfer process is handled, you can build your own integrated solution from the ground up. Most likely, you would need a team of experts to handle all the complex issues involved in such an undertaking.

- **Pros:** You have total control over the look and feel of the shopping cart. If something goes wrong, you can take matters into your own hands to fix it, rather than relying on someone else’s customer service to pick up the phone or respond to e-mails. All the data about your customers and what they buy is under your control.
- **Cons:** You have to take care of every little nitpicky detail. If you miss something, only you can fix it. And if you’re away and the site goes down while you’re on vacation, you’re out of business (at least until you can access your site again). You will need to have your own mechanism for transferring the funds, and maintain your own secure database for your customer’s financial data.

Mobile commerce is evolving so rapidly that the companies listed here may well have added new features by the time you read this. Visit [www.MobileWebDesignBlog.com](http://www.MobileWebDesignBlog.com) for updates to the providers and services featured in this chapter and elsewhere in the book.
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Figure 11-3: Many popular e-commerce brands, including PayPal, offer special services for m-commerce.

For this chapter, we focus on the two simplest options. The nearby sidebar “Developing a custom system for mobile commerce” can help you get started with a custom solution if that’s the route you need to go.

No matter what route you choose, the key points in the earlier section “Understanding the Basic Building Blocks of an M-Commerce Solution” apply because all m-commerce sites have some basic things in common.

Checking out m-commerce payment solutions

Most sites are best served by the latest online m-commerce tools, which combine the flexibility of displaying merchandise on your own site with offloading the heavy-duty banking and money-transfer functions to close the deal. Most Web designers agree that the best way for individuals and small to mid-size businesses to add m-commerce is to use a company that includes a shopping cart and transaction service or to combine a dedicated shopping cart with a transaction service. In this section, we introduce you to companies that offer m-commerce services.
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Developing a custom system for mobile commerce

If you truly want to create your own custom-built site, look for more advanced books or other training specific to developing shopping carts, or consider paying for one of the services described in the “Comparing Mobile Commerce Solutions” section or hiring a contractor to take care of it for you.

To create such a system, here’s what you need:

- You need to know how to use sophisticated functions in a dynamic programming language or technology, such as ASP.NET or PHP.
- You need the ability to integrate your system into a payment system in ways that require managing a secure server, SSL certificates, and other settings on your Web server.

Because all that gets complicated quickly, some great services solve all your problems at once, and if you like that approach, decide how much you want to be able to customize the design and what the services cost.

Major e-commerce sites, such as Amazon or eBay, have spent millions on developing custom shopping functions for their sites. If all you want is the simplest solution, you can list your goods on those sites and then simply include a link to that item on your mobile site. That’s the simplest option, and the initial investment is minimal, but many people outgrow that option pretty quickly.

Amazon Payments

http://payments.amazon.com

This powerful and flexible payment engine allows users who are already familiar with, and trust, the Amazon brand to purchase goods from your Web site using their Amazon customer ID. The advantage is that Amazon has established itself as one of the biggest retailers on the Web, and its technological backbone is very strong.

The downside, however, is that your customers have to already have an account with Amazon; otherwise, they’re forced to create one when they make their first payment. As you can see in Figure 11-4, the Amazon brand is all over every page (on the buttons, in the colors, and in the typography), which helps your customers know they’re dealing with a reputable firm — but that also means Amazon promotes itself all over your site.

Still, if you sell digital downloads, such as ringtones, MP3s, videos, or pictures, Amazon’s payment and pricing system is innovative and robust. And if you already sell your stuff on Amazon, it’s very easy to integrate the links and payment system on your Web site because customers who have already paid with Amazon at your m-commerce store can buy with just one click. The Amazon site has detailed instructions for both amateurs looking for the simplest solution and seasoned developers looking to customize.
As of this writing, iTunes is still limited in what it sells, restricting anyone using the service to music, videos, and iPhone applications. You must submit your digital goods to iTunes for review before they can be listed on the site, and Apple's approval process can take a few days or even weeks.

But with more than 100 million credit card accounts on file (outnumbering even the 94 million Amazon customers or the 75 million PayPal customers), speculation is rife that Apple will extend its iTunes checkout processing technology to allow merchants to sell their stuff to customers who want to pay via their existing iTunes accounts. And iTunes provides digital goods for the iPhone, iPod touch, and iPad, so the combined audience is significant.

PayPal is highly customizable and offers a wide range of services, broad international e-commerce support, and everything from simple one-click buttons to high-end transaction services you can integrate into most of the popular shopping cart services.

At the high end, you need quite a bit of technical coding skills to tweak PayPal's API to work with third-party shopping carts, but PayPal has been
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around for a long time, so you can draw on a large international developer network when you need help. At the low end, you can easily add PayPal buttons. See the section “Creating a simple PayPal Buy button,” later in this chapter.

As with Amazon, the PayPal brand is the one your customers see on each Buy button when it comes time to make their payments.

PayPal has also created some extremely powerful and extensible technology to allow people to transform their cellphones into wallets. And because PayPal is owned by eBay, the integration between the two services is quite good. If you’re selling your items through your eBay store, this may be all you need.

PayPal has also introduced an app for the iPhone that allows users to transfer money directly from one phone to the other, simply by bumping together the two phones.

**Google Checkout**

https://checkout.google.com/sell

Google has spent enormous amounts of time and money developing a whole host of other products and services to go along with its core business of being the top search engine on the planet. We discuss setting up Google Checkout later in this chapter because of the wide panoply of other products and services that Google has — most especially Google’s recent acquisition of the mobile advertising company AdMob for $750 million. Spending that kind of money is a clear indication that Google takes the mobile Web seriously, and that it’s going to continue to devote significant time and resources to ensuring that its existing products are mobile-friendly.

Google Checkout is easy to set up, and because it piggybacks on Google’s massive network of server farms, it loads quickly — no matter where on earth your user accesses your m-commerce site from (not an insignificant consideration as billions of people come online via their mobile devices).

Like PayPal, you can use Google Checkout to add a Buy Now button to your site, to set up a simple shopping cart and transaction package, or to use Google for the transaction processing in combination with any number of shopping carts that are designed to work with Google. (Some shopping carts can be integrated with PayPal, Google, or both if you want to give customers the option.)

Similar to Amazon, if you use Google Checkout, the downside is that your customers have to already have an account with Google; otherwise, they’re forced to create one when they make their first payment. The Google brand is what your customers will see when they make their payments; the buttons will have the Google logo on them, the color scheme will look like the
color scheme that is used by Google, the words “Fast checkout through Google” will appear on the screen, along with a link that says “What is Google Checkout?” and leads to a page that is all about Google Checkout. Another possible downside for you may be that Google Checkout doesn’t support currency in as many countries as PayPal. At the time of this writing, Google Checkout accepts U.S. dollars, euros, and British pounds sterling, but expect that list to grow over time.

Dozens of e-commerce shopping cart providers have made a special effort to make sure that they integrate cleanly with Google Checkout. If you want to use a more sophisticated shopping cart than the one provided by Google, you can view Google’s recommended list of third-party vendors in the Integration Partners section on its Web site at checkout.google.com/seller/integrate_cart.html.

If you use Google Checkout, Google offers a couple other features that can tie into your Google Checkout system:

✓ Google also has a wizard that allows you to easily convert a Google Docs spreadsheet into a shopping cart. If you have a Google ID, you can use Google Docs to create a spreadsheet via the Web. Basically, in Google Docs, you fill the spreadsheet with any data you want to include about your products, including descriptions, pictures, pricing info, and so on. Then, run the wizard at https://storegadgetwizard.appspot.com/storegadgetwizard/ to convert your spreadsheet into a shopping cart.

✓ Google Analytics allows you to track page traffic information, such as how many users come to your site, which items are most popular, and how long visitors spend on each page.

asknet

www.asknet.com

This large, international e-commerce company is based in Germany. asknet offers custom-built mobile sites and high-end m-commerce.

asknet is partnered with many Internet security companies and software retailers, and the company specializes in handling m-commerce across international boundaries. asknet provides support for multiple currencies, tax laws, delivery of goods, and customer tracking. Videos on their site (see Figure 11-5) explain how their service works.

asknet also has a network of warehouses that can handle fulfillment, so you can use it to store your merchandise and handle shipping around the world. asknet even burns CDs/DVDs, applies your labels, sticks them into jewel cases, and delivers them to your customers if you sell digital merchandise. As you might expect, asknet is far from the cheapest solution; it doesn’t even list its prices on its site, but you can contact asknet for more information.
CardinalCommerce

www.cardinalcommerce.com

Another high-end company that specializes in constructing the back-end payment solutions for major multinational corporations (see Figure 11-6), CardinalCommerce has made mobile a key part of its strategy.

CardinalCommerce’s expertise centers on creating secure mobile banking and bill payment platforms for which it’s been granted multiple original patents.

CardinalCommerce works with companies like Visa and MasterCard to build debit-based payment sites, and with international banks to develop identification and authorization systems for money transfers. Because CardinalCommerce built m-commerce sites for companies like SkyMall, 20th Century Fox, and Secure Vault, it obviously can handle many currencies. We assume this is one of the more expensive options, but CardinalCommerce doesn’t publish its price list on its Web site.

mPoria

www.mporia.com

Designed from the ground up for the mobile Web, mPoria offers many great features, including secure checkout, site reporting, and real-time inventory management. This is one of the only dedicated mobile shopping carts we’ve found that you can customize and update yourself. And with prices starting at $20 per month, it’s one of the most cost-effective options.
Open-source shopping carts for mobile

Many Web sites already use popular open-source shopping carts, including Zen Cart (www.zen-cart.com) and OS Commerce (www.oscommerce.com). Because they are open-source, they are free to download, but many people make money by charging to take the plain cart and make it look good.

The Web is full of design shops that make it their business to construct templates and themes that allow businesses to change the look and layout of their online stores. Some sites offer mobile store templates, but the forums and bulletin boards of the open-source community are full of complaints from people who have tried to use these plug-ins. People have found that these templates either break their stores or require far more technical expertise than advertised.

However, thousands of software developers and coders are working on this problem, so if you already have a popular shopping cart like one of the above, plug-ins that you could try with your existing e-commerce solution may be hitting the Web every day.

mPoria is a service for small to mid-level businesses that want to dip their toes into m-commerce but don’t want to invest thousands just to get started. Prices range from $20 per month to $100 per month, based on the number of products in your online store. The pricing is based on 20–700 items per store.

mPoria offers a wizard that guides you through creating your own m-commerce portal, but it has some limits on how much you can customize the service. mPoria does have an automated process to help you build
the site yourself (see Figure 11-7). However, the list of phones that are supported by mPoria’s GoMobile! Sites (the sites that they custom-build for their clients) is incomplete, and it handles only U.S. dollars as a currency (although that may change as the company grows). At the higher levels of service, mPoria offers inventory tracking and other CRM tools.

Figure 11-7: mPoria leads you through an automated wizard to create your mobile site.

Setting Up Commerce on Your Mobile Site

In this section, we guide you step by step through the process of setting up m-commerce with popular and easy-to-use services. You begin with the simplest option — adding Buy buttons with the popular PayPal service. You also discover how to create a basic shopping cart with Google Checkout. We guide you through the process of adding your Buy button or shopping cart to your mobile Web site using Dreamweaver and WordPress.

Both Google Checkout and PayPal offer simple Buy buttons, as well as shopping cart features, making it easy for anyone to sell products on a Web site with no upfront costs and a competitive transaction fee. Why would you choose Google over PayPal or vice versa? Two key differences: Google has a nicer interface design, but it doesn’t support as many foreign currencies as PayPal. The PayPal interface is a bit clunky: Each time a user adds a product to the shopping cart, they are sent off to the PayPal site and have to navigate back to your site to add more products. However, you can send products to more countries using PayPal.
Creating a simple PayPal Buy button

The simplest and quickest option if you want to sell only a few products or services on your Web site is to create a PayPal button for each item you want to sell. Follow these steps:

1. **Open your browser and navigate to www.paypal.com.**
   If you have a PayPal account, log in here. If you don’t have an account, click on the Sign Up link to establish an account, and follow PayPal’s easy online instructions. Depending on what level of account you want to sign up for, you will need a valid credit card and your merchant account information handy.

2. **Click on the Merchant Services tab.**
   A page will open with many links to all the various actions you can take with your PayPal account, as well as links to various resources to help you run your online business.

3. **Click on the Website Payments Standard link in the box on the left side of the page.**
   The Website Payments Standard: Overview page opens (see Figure 11-8). This page allows you to choose from a couple other options, but for now, stick with creating a button for just one item at a time. PayPal also offers a Website Payments Pro service, but this requires that you register for a business account with PayPal and that you use an integrated shopping cart or build one with PayPal’s APIs.

4. **Below the Sell Single Items heading, click the Create One Now link.**
   The Create PayPal Payment Button page opens with fields in it for the description of your item.

5. **Below Choose a button type, choose Buy Now from the drop-down list.**
   You can also create a payment button to sell your services, set up a subscription or recurring billing process, collect a donation, or buy a gift certificate. In this example, we make a simple button to sell one item.

6. **Type the item name in the Item Name field.**
   The optional Item ID field allows you to enter a tracking code for the item you’re selling, if you want to use that number in your spreadsheets or inventory programs.

7. **In the Shipping section, fill in the amount you charge for the shipping and handling of your item.**

8. **In the Tax section, fill in the amount of sales tax and other applicable taxes you charge.**

9. **Choose how you want to be notified when someone has bought your item.**
You can be notified through your secure merchant account. If you select this option, your e-mail address doesn’t appear in the button’s HTML code. This may or may not be important to you. Some merchants want to appear as transparent and open as possible; others are afraid of having their e-mail inboxes overflow with spam.

If you choose to use your PayPal e-mail address, you receive a notification in your e-mail inbox every time someone buys something from you with this PayPal button.

10. **Click the Create Button button.**

The You’ve Created Your Button page opens. In a panel in the middle of the page is the code for your PayPal button. Don’t worry that the code looks like a lot of gobbledygook. You don’t have to type this in anywhere.

11. **Click the Select Code button to select the button code.**

The code is highlighted.

12. **Press Ctrl+C (on a Mac, Ô+C) to copy the code.**

You aren’t done yet. . . .

13. **Depending on what you use to create your Web site, skip to the section “Adding a shopping cart to WordPress,” or “Adding a shopping cart with Dreamweaver,” later in this chapter. Start with Step 1 in each section.**
Creating a simple shopping cart with Google Checkout

Because so many people already use Gmail, Google Docs, or some other Web-based Google product, integrate Google Checkout. If you already have a Google account, you’re halfway there. Also, Google Checkout has a special integration with Google AdSense, so you can easily advertise your products. Make sure that you have handy some basic information about your products before you proceed further. You need to know the names of your items, their prices, what options are available (size, color, weight, materials, and so on), and the URL where the picture of that item appears on your Web site. After you have that info, follow these steps:

1. **Open your browser and navigate to** http://checkout.google.com/sell.
   
The sign-in page opens.

2. **Type your e-mail address and password.**
   
   If you’ve used Gmail, your username may already appear; if so, just type your password.

3. **Click the Sign In button and then follow the steps to either use an existing account or create a new one.**
   
The Google Checkout page opens.

4. **Click on the Tools tab.**
   
The Integrate Your Website with Google Checkout page opens.

5. **In the Google Checkout sign-in screen, enter your e-mail address and password, and then click the Sign In and Continue button.**
   
The Tell Us about Your Business page opens. One of the somewhat annoying tics of Google Checkout is that it prompts you to enter your username and password at every turn. You may be prompted during several steps along the way to re-enter this information. Some of that is because Google times-out the sessions with Google Checkout to prevent you from leaving the screen open on your computer when you walk away from it and allowing someone else to quickly drain your accounts or hijack your site.

6. **Type the contact information, public contact information, and financial information for your business into the boxes provided on the page.**

7. **Scroll down to the bottom of the page and select the I Agree to the Terms of Service check box.**
   
The Signup Complete page opens.
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Note: Read through the Terms of Service. You must agree to them if you want to continue and use the service.

8. Click the Google Checkout Shopping Cart link on the right side of the page.

   A page opens (see Figure 11-9) with fields for you to enter the details of your product.

9. Choose from the following product types:

   • *Simple* means that there's only one product, with no other options or prices, such as an antique vase.

   • *With Multiple Options* enables you to let your customers choose multiple options that are all the same price for a product, such as a T-shirt that can be white, blue, or black.

   • *With Multiple Prices* enables you to take a basic item and charge different prices, depending on the options that the customer chooses. This is the option shown in Figure 11-9 in which you can buy the snaggletoothed tabby with or without his jester's cap, which of course costs much more.

10. Enter a product name in the Title field.

11. (Optional) Enter the URL where the image of your product appears on your Web site.

   ![Google Checkout Shopping Cart](image)

   Figure 11-9: Google Checkout has a very simple interface, and it takes only three steps to create a button.
Adding the image’s URL causes a small thumbnail of the item to appear next to the item title and price in the shopping cart when your customer clicks to purchase it. Because this is just a little extra flourish, don’t feel like you have to do this if it gets difficult or time-consuming.

a. To get the URL, navigate to where the item appears on your site and then right-click (on a Mac, Command+click) the photo of the item.

A menu opens with options that allow you to do many things with the photo.

b. Click Copy Image Location in the drop-down menu and then navigate back to the Google Checkout page.

c. Click in the Image URL field and press Ctrl+V (on a Mac, Command+V) to paste the image URL into the field.

12. (Optional) Enter the options in the fields next to the words Option 1 and Option 2.

The default fields are Small and Large, but you can type whatever you want. If you have many options for the item, click the Add an Option link and keep typing until all the sizes, colors, time lengths, or whatever other variables your item has are covered.

13. Enter the price.

Next to each option is a field for the price associated with that option. Click the fields and then type the prices.

14. Test your changes in the Preview box.

You can see what your shopping cart will look like by clicking the buttons in the Preview box. If you spot an error, go back through the previous steps and re-enter the correct information.

15. When you have the description the way you want it, select the Yes, I Have Configured My Account to Accept Unsigned Shopping Carts check box and be sure to configure your account at some point.

If you haven’t configured your account yet, you can come back and do it later; just make sure to select the check box here.

Because the Google Checkout shopping cart works entirely in the Web browser, a visitor to your site can alter the pricing in Google Checkout when she places an order. Unfortunately, Google can’t protect the secret key needed to sign a shopping cart, but you can get around this limitation by letting the shopping cart work without being signed.

To accept unsigned carts:

a. Click the Settings tab and then click the Integration link on the left side of the page.
b. Deselect the My Company Will Only Post Digitally Signed Carts check box and then click the Save button.

16. To generate the code to add to your Web page, click the Create Button Code button.

A page opens with two boxes of code generated by Google. The top box contains the code that needs to be copied into your page where you want the button to appear.

17. Select the code and press Ctrl+C (on a Mac, Command+C).

The next step depends on whether you sell your items from a blog, such as WordPress, or from a static Web page that you’ve designed with a program, such as Dreamweaver. The bottom box contains the code that creates the cart; it needs to be pasted into the bottom of each HTML page, which we address in the two following sections.

18. Repeat these steps for each item in your store.

You have to go through these steps for each separate store item.

Adding a shopping cart to WordPress

Many site owners are migrating away from having a collection of static pages or using expensive, custom-made content management systems. Instead, they’re opting for open-source solutions like WordPress. Yes, WordPress started as a free blogging-software solution; however, its widespread use has spurred legions of developers around the world to customize its source code to make it do all sorts of wonderful things.

When you use WordPress for your shopping cart, you need to know the pros and cons:

✔️ **Pros:** WordPress allows a site owner to quickly and easily update the site’s content; as the saying goes, “If you can type an e-mail, you can write a blog post.” Adding the shopping cart buttons you create in the previous two sections to a WordPress blog is as easy as cutting and pasting.

✔️ **Con:** Adjusting the look and functionality of a WordPress site can be tricky and requires expert knowledge of the programming language PHP.

To copy and paste button code into a WordPress blog post, follow the steps here. (If you use another CMS, such as Joomla!, Drupal, Movable Type, or Blogger, you can still use the basic concepts explained here to make the buttons show up next to your items.)
1. Open a new tab in your browser and navigate to your blog’s Dashboard.
   This is the page where you compose new posts, control which widgets appear in your sidebars, or adjust your site’s theme.

2. In the Posts heading, click the Posts link.

3. Scroll until you find the post containing the item that you just created either the PayPal button or Google Shopping Cart for.
   When you run your mouse pointer over the title of the post, a menu appears, with the options for editing that post.

4. Click the Edit link.
   The post opens in the familiar window that you use to type text and upload photos.

5. In the upper-right corner of the editing window, click the HTML tab.
   In the editing window, the text changes to the code view of the blog post.

6. Click in your post where you want to insert the button for the item you want to sell and then press Ctrl+V (on a Mac, Command+V) to paste in the code for the button.
   This is the code that you copied in Step 11 (for the PayPal button) or Step 17 (for the Google Shopping Cart) above. See Figure 11-10 for an example of what inserting this code will look like.

7. Click the Visual tab to see where the button appears in your post.

8. If you don’t like the button’s placement, switch to HTML view, delete the button code from where you’ve placed it, and then repeat Step 6 to put it in the new location.

9. When you have the button where you want it to appear, click the Publish button on the right to publish the page. (If you are editing an existing page, the Publish button changes to an Update button.)

10. (For Google Checkout) Click to return to the tab in your browser where you got the code you just placed in the blog post.
    This is the page where you got the code for your shopping cart. You’re going to have to get one more piece of code to make this work in your WordPress blog.

11. Select the code in the bottom box on the page and press Ctrl+C (on a Mac, Command+C); click to return to the tab where your WordPress blog’s dashboard is still open in your browser.
    The bottom box is the one with the heading that reads “Add this code only once for each html page, just before the </body> tag.”
12. In the Appearance panel on the left side of your Dashboard, click the Editor link.

The Edit Themes page opens in your browser. In the middle panel is the code for your blog. On the right are the various templates controlling how the elements of your blog (such as the header, the sidebar, or the comments) appear.

13. On the right side of the page, click the Footer link.

The PHP code for the footer that appears on every page of your blog appears in the middle panel.

14. Scroll until you see the </body> code and then click the line above and press Enter (on a Mac, press Return).

15. Press Ctrl+V (on a Mac, Command+V) to paste the code here.

This code allows every page on your blog to know how to handle the buttons and Google Checkout shopping cart. This piece of code has your Merchant ID number in it and the currency you use.

16. Click the Update File button and then test your work by clicking the name of your WordPress blog at the top of the Dashboard page.

Test how well your button works by going through the order process — right up to placing an order to yourself from your site.
Adding a shopping cart with Dreamweaver

If you sell your merchandise through a static site, insert the button(s) by using whatever tool you used to construct the site. In the example here, we will show you how to use Dreamweaver, the industry-standard tool used to create custom Web sites. To insert a button with Dreamweaver, follow these steps:

1. **Open the page of the item using Dreamweaver and then click the Split button at the top of the workspace.**
   
   This opens the dual-panel view, where you see the underlying code and the page’s design.

2. **Click the page where you want the button to appear and then press Ctrl+V (on Mac, Command+V) to paste the code for the button into your page.**
   
   Again, this is the code that you copied in Step 11 (for the PayPal button) or Step 17 (for the Google Shopping Cart) above.

3. **Return to the tab in your browser where you created the shopping cart code, and then select and copy the code in the lower panel.**
   
   Press Ctrl+C (on a Mac, Command+C) to copy the code.

4. **Return to Dreamweaver, scroll to the bottom of your page, and find the </body> tag.**

5. **Click just above this tag and press Ctrl+V (on Mac, Command+V) to insert the code.**

   This code needs to be added to each HTML page that you have the shopping cart button on (see Figure 11-11 for an example of what inserting the code in Dreamweaver will look like). If you have multiple pages, put this code at the bottom of each page. It’s helpful to use the Split view when you paste in the code for your button, not only so you can control exactly where it goes in amidst your other page elements, but so you can get a sense of how it fits into the rest of your page design.

   If, however, you have multiple items on one HTML page, return to your browser to generate the other buttons for the other items on your page.
Figure 11-11: Dreamweaver's split view helps you insert the code for the shopping cart.