Table 9.1 Continued

MIME Type	File Extension	Remark
image/jpg	.jpg	JPG format
image/png	.png	PNG format
image/vnd.nok-3dscreensaver	.n3a	Nokia screensaver
image/vnd.nok-oplogo-color	.nol	Nokia operator logo (GIF image)
image/vnd.wap.wbmp	.wbmp	WAP content: WAP bitmap image
image/vnd.wap.wbmp	.wbmp	Wireless bitmap Image
image/x-bmp	.bmp	BMP image
text/css	.css	CSS1, CSS2, and wireless CSS
text/html	.html	HTML
text/vnd.sun.j2me.app-descriptor	.jad	J2ME content: Java descriptor file
text/vnd.wap.wml	.wml	WML markup
text/vnd.wap.wmlscript	.wmls	WML Script
text/x-co-desc	.cod	Nokia Content Object Description file
text/x-emelody	.emy	Sony Ericsson eMelody sound format
text/x-imelody	.imy	iMelody, a feature-rich ringtone format
text/x-vCalendar	.vcs	vCalendar, a format for electronic calendaring and scheduling
text/x-vCard	.vcf	Exchanging information about people and resources
video/avi	.avi	AVI video format
video/mpeg	.mpeg	MPEG video format
x-epoc/x-sisx-app	.sisx	Symbian installer
x-nokia-widget	.wgz	Nokia Widget Archive

Most Web servers do not come preconfigured to support mobile MIME types, although this is becoming more common. If you are serving mobile content, it is a good idea to check your servers and manually add any mobile MIME types that are not already present and recognized by the Web server.

In some cases, devices can accept multiple file types but still have a preference, usually because the device has a more complete and comprehensive capability to execute a specific file type. You might be able to use a combination of User-Agent headers, accept headers, and a User-Agent profile (UAProf.) to provide the preferred type of content based on the handset that is accessing the site.

The second part of the Content-Type header is the character set, or charset. The character set you choose can impact the bandwidth necessary to transmit a page, because some characters require more memory than others. If your website is written primarily in Latin-based characters and languages, such as English, French, and German, you should be using UTF-8. If your website is written in non-Latin characters, such as Chinese, Japanese, or Hebrew, UTF-16 is ideal.

Content-Disposition

This header enables you to specify that a file should not be displayed automatically, but instead should open outside the mobile browser and prompt a File Download dialog box whenever accepted MIME types are requested. This is particularly helpful when your Web page allows visitors to download applications, games, images, ringtones, wallpapers, or other types of non-Web content.

Mobile Code Review

The most important thing you can do ensure the success of your mobile website is to code it correctly. The code affects how quickly the pages download, how they look on different mobile handsets, and what features are available and working in the mobile environment.

If you are starting from scratch or from a premade template, you should strive to create an XHTML-compliant code base. XHTML has the most rigid set of HTML coding standards and, thus, is best for ensuring that your website will work well across the broadest number of mobile handsets and browsers. XHTML requires text alternatives to all nontext elements, which is ideal for mobile, in case the phone downloads some portion of the Web page incorrectly.

Before style sheets were developed, Webmasters used "tables," much like a spreadsheet or a grid in Excel, to organize a Web page. The code of the Web page included specifications about the table width, row height, and other attributes of the grid. The actual grid was never visible by the Web visitors, but it did help the Web designer control the layout of the page.

When developing or adapting a page for mobile, tables are not desirable. Many phones can render a simple table-based layout, but the table specifications embedded in the page create a lot of extra code that can slow the download of the page. In

more complicated pages, table-based layouts can include tables within tables, or "nested" tables. Nested tables are known to cause more problems for mobile viewing, either rendering incorrectly or not rendering at all.

One of the overarching rules in mobile development is to always provide text alternatives for any nontext content. This includes images, videos, audio files, scripts, and objects. Every type of content has its own alternatives when the files cannot be downloaded, but you should always at least include alternative text (Alt text) to describe the content. Ideally, all mobile pages will still be useful if rendered exclusively in text, with no images or scripts.

JavaScript

JavaScript is a coding language used on the traditional Web to enhance the traditional HTML user interface and make a more dynamic Web experience. On the traditional Web, it is frequently used to control navigation, drop-down menus, form submissions, and pop-up windows, but it can create problems when displaying on many mobile browsers.

The primary concern should always be navigation. When JavaScript navigation is displayed on a mobile browser that is not equipped to display it, either the navigation will display without rollover characteristics that enable you to see drop-down menus, or it will display in full, as a long list of navigational options. This will force your main content lower on the mobile screen, in some cases, making it hard or impossible for users to know when they have successfully loaded a new page because all the unique content is below the bottom of the mobile screen.

If your JavaScript navigation is displaying in full, consider moving your main navigation to the bottom of the page when it is displayed on a mobile phone, and replace it with a short list of access keys, jump links, or bookmarks at the top of the page (as shown in Figure 9.1). These jump links can help people quickly move to the main content, the main navigation, and the other important elements on the page without pushing the unique content too low on the page or requiring the user to scroll. This gives visitors a preview of the content on the page and helps them find what they are looking for quickly and easily.

Figure 9.2 shows an example of good versus bad mobile content layout.

Figure 9.1 *Mobile jump links enable users to quickly navigate your mobile site.*

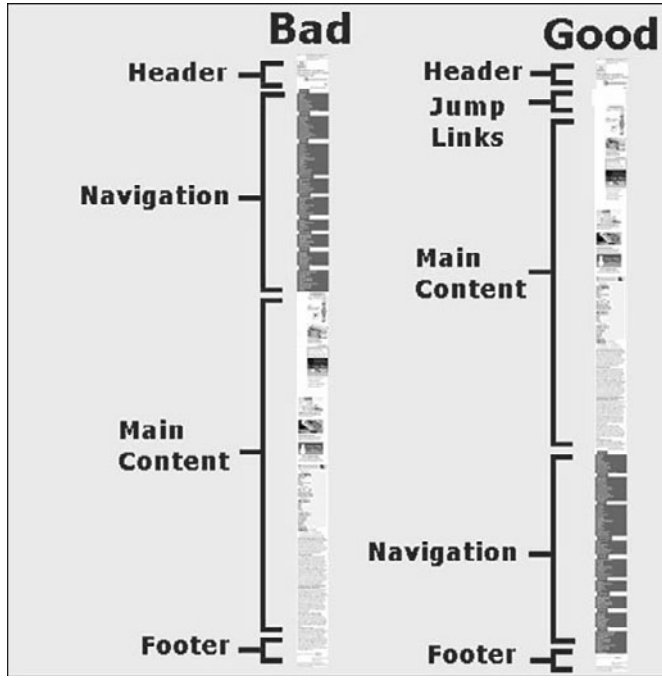

Figure 9.2 *Good mobile design vs. bad mobile design.*

Another application of JavaScript is to create hover effects within navigation and images. Hover effects are represented in JavaScript as mouseover and mouseout. These can be problematic because most mobile phones, including the iPhone, do not offer the capability to hover over any particular object on the screen, because the phones do not have mice to hover with. Even when there is mouse capability function on the phone, the hover JavaScript will likely not execute. (On a similar note, the :hover pseudoclass in CSS doesn't work on iPhones, either.)

JavaScript can also be used to create pop-up windows, which are problematic on the traditional Web and even more so on the mobile Web because many mobile browsers can handle only one window or tab at a time. Many of the new mobile browsers are blocking pop-up windows by default, and the JavaScript that calls for pop-up windows can actually cause some mobile phones to crash; this should be avoided.

In the past two years, mobile browsers have come a long way in their rendering of JavaScript. Most true Web browsing phones can now handle basic, well-coded JavaScript, but more complex or sloppily coded scripts are still a problem. On the iPhone, JavaScript is limited to five seconds of execution time.

AJAX

Asynchronous JavaScript and XML (AJAX) is a coding language that essentially mixes JavaScript and XML to improve the Web experience. With AJAX, a website can receive information from the server and re-render parts of a page without reloading the entire page or changing URLs. In general, AJAX has the same problems on mobile phones as traditional JavaScript, but there has been a movement recently to promote mobile AJAX. This is because AJAX can allow a mobile Web page to respond to the user with a partial page load rather than a complete page load, minimizing bandwidth usage and load time. Although it is still not mainstream, the following mobile browsers can render at least some AJAX:

- Opera Mobile 8.0 (not Opera Mini)
- Internet Explorer Mobile 5.0
- S60 3rd edition
- Minimo
- OpenWave
- NetFront 3.4
- Safari Mobile

When using JavaScript or AJAX on a mobile Web page, it is important to program with graceful degradation in mind. Graceful degradation is a design principle that ensures that browsers are presented only with content that they are able to render correctly; thus, less sophisticated browsers can render a page one way, and more sophisticated browsers can render the same page another way. Because there are so many different mobile browsers, and they all handle scripting languages a bit differently, this is very important. This principle is covered in more detail in "Directing Traffic with User Agent Detection," later in this chapter.

Forms

Web forms can be programmed in a variety of languages, including JavaScript, AJAX, C#, ASP, and ASP.NET. In the mobile world, forms can cause problems, either because the form labels don't line up correctly with the form entry boxes or because the JavaScript in the Submit function simply doesn't work. The only way to know for sure that your form will work on mobile phones is to actually test it. Although this problem has no universal solution, a couple best practices are associated with mobile forms.

- First, include links for users to email or text-message themselves a link to the form so that they can complete it later. This is helpful when the

form is not working or if the user simply doesn't want to type all the information on the mobile phone. If possible, include a phone number that viewers can click on to call and submit their information over the phone rather than through a Web form. This is especially useful if users have questions or need special assistance, and it loops in the full functionality of the phone.

- You can use a variety of methods to allow visitors to enter information on a form. As on a traditional computer, they can be radio buttons, check boxes, text boxes, drop-down menus, or even calendar widgets. The main concern is that the form must be quick and easy to use and also intuitive.
- When designing a form, be sure to use an asterisk (*) to designate when fields are required, and eliminate as many optional fields as possible. Use radio buttons and check boxes as much as you can, to prevent your users from having to type too much on the phone keypad.
- If you are using a drop-down menu, the HTML <SELECT> element, a unique feature on the iPhone, turns the menu into a dial that can be flicked up or down when it is displayed on the iPhone, as shown in Figure 9.3.

Figure 9.3 *An example of the iPhone menu dial that displays when the <SELECT> element is included.*

- If you have to request a narrative or sentence response from your users, be careful with large response fields that would normally have a scroll bar in them, because these will not work on the iPhone. The iPhone

never uses scroll bars, even along the right side of the page, like most browsers, so it will not include the scroll bar in your text field and the viewer will not be able to see the contents of the text response. Technically, iPhone users can use a two-finger method of scrolling within the box, but without a visual cue to indicate that this is possible, it creates a serious usability concern. Form fields such as this one tend to have a fixed height and width, so first adjust the height designation and then test on the iPhone to see if it will address the problem. If that doesn't work, you might have to break the questions into multiple questions or eliminate it.

Each of your questions should be labeled, and the input fields should be directly below or next to the label. You can also include input prompts within the text boxes, to remind the user what type of information you are requesting or to give more instructions about the response, as shown in Figure 9.4. In some cases, when users are typing their information into a phone, the values will be all text or all numbers. Many phones use the same buttons to control numbers and letters, so the user might be forced to use an Alt or Shift key repeatedly to complete the field.

Figure 9.4 *An example of form input instructions. "Google Custom Search" is the input instruction for this form.*

- You can also use WAP Input Format or WCSS. Table 9.2 shows a variety of property values, called the input masks.

Table 9.2 WAP Input Format Property Values

Format Characters	Usage
A	Lowercase letters or characters
A	Uppercase letters or characters
N	Numbers and number characters
N	Number characters
X	Any lowercase letter, number, or symbol
X	Any uppercase letter, number, or symbol
M	Sets the default entry value to lower case
M	Sets the default entry value to upper case

- When applied in the code, <input type=”text” style=”-wap-input-format: “N””/> forces a number, and <input type=”text” style=”-wap-input-format: “m””/> forces letters.

  When setting the WAP input property, you can specify the order of the inputs and the number of a particular type of input. For instance, -wap-input-format: “NN” tells the form that it can accept two number characters in a row, but wap-input-format: “2N” tells the form that it can accept no more than two number characters in the field. If you would like to automatically capitalize the first letter of a form field, such as for a person’s name or a street name, you could use wap-input-format: “A*a” which would make the first letter that is input a capital letter but will allow any number of lowercase letters after it.

- When creating mobile forms, it is best to authenticate the information as the user types. This makes it easier for users to update the fields as they go, rather than having to go back through the form later, to identify and update form fields with errors. It is also important to be as flexible as possible with mobile form inputs. This includes accepting information in a variety of different formats. For instance, a form should be able to accept the types of phone number formatting shown in Table 9.3. It should do so without showing an error and should also display the information correctly on the mobile phone and parse the information correctly for the database on the back end. Similar standards should be followed with credit card numbers, serial numbers, and any other entries that could be entered in a variety of different ways.

Table 9.3 Acceptable Phone Number Formatting for Web Forms

123-456-7891	1-123-456-7891	1(123)456.7891
123.456.7891	1 123-456-7891	+1(123)456.7891
123 456 7891	+1-123-456-7891	1.123.456.7891
1234567891	+1 123-456-7891	+1.123.456.7891
(123) 456 781	+1(123)456-7891	11234567891
(123) 456-7891	+1(123)-456-7891	

- As browsers get more sophisticated, they might also incorporate autofill features. These will be quite handy when they are integrated into mobile browsing and will make it more likely that mobile visitors will be willing to complete your forms. Currently, most autofill programs recognize the field names shown in Table 9.4.

Table 9.4 Recognizable Field Names	
email	phone
first-name	street
firstname	city
last-name	country
lastname	state (used for county outside US)
full-name	postalcode
birthday	zip
company	Ecom_ReceiptTo_Postal_Name_First
jobtitle	Ecom_ReceiptTo_Postal_Name_Last

- Also consider using autocomplete features whenever possible. Autocomplete is similar to autofill, but it works on a field-by-field basis and uses the first couple values that the user inputs to anticipate what the user is intending to type and provide suggestions that they can select instead of having to finish typing the word on their own. Most mobile browsers offer an autocomplete in their address bar, but you can also do this in form fields.
- Finally, when working with online forms, submitting to a secure server can also cause problems. Some information, such as credit card numbers, should be passed only over a secure server, but this should be avoided whenever possible in the mobile world. For more information about accepting payments over a mobile phone, refer to Chapter 12, "Mobile E-Commerce."

Flash and Video

Flash and video are becoming much more common on mobile phones, but they still can be quite tricky. Traditional Flash does not work on most mobile phones, but a streamlined mobile version, called Flash Light, is supported by phones from the manufacturers shown in Table 9.5.

Table 9.5 Flash Light Capable Phones			
Fujitsu	Motorola	Samsung	Siemens
Hitachi	NEC	Sanyo	Sony
Kyocera	Nokia	Sendo	Ericsson
LG	Panasonic	Sharp	Toshiba
Mitsubishi			

Many of these handsets are available primarily in Japan, but it is expected that Flash Light will become much more prominent in the rest of the world as well. For a full list of phones that can display Flash Light, visit www.adobe.com/mobile/supported_devices/handsets.html. Flash Light files are similar to traditional Flash, except that they have lower picture and audio quality. The next iteration, Flash Light 3.1, is available on Windows Mobile phones, the Nokia S60, and the Palm Pre, but not the iPhone.

Clearly, the iPhone will some day support some type of animation, but it is expected to be an iPhone-specific version of the Flash player that will be more compatible with the entire iPhone framework. If the technology is not developed quickly enough, HTML5 also will support the embedding of different animations and video, which might make Flash unnecessary.

Silverlight

Silverlight is another browser-based media player add-in that Microsoft developed to rival Flash. Silverlight is available on Windows Mobile phones, as well as the Nokia S60 and the iPhone. The allure of Silverlight comes from the promise that the same video can be used on traditional and mobile browsers, but can be adapted on-the-fly to fit the size and file requirements of the phone it is sent to.

Silverlight is a .NET-based platform that enables developers to add interactivity to their videos, much like a Flash file. It lets you zoom into videos with amazing clarity and also supports multitouch commands, as with the pinching and pulling on the iPhone. (The MIME type for Silverlight is `xaml`.)

YouTube

YouTube is another video resource that can be useful on mobile phones. It accepts the following file formats: avi, .mpg, .wmv, and .mov. For videos to be available in YouTube on the iPhone, however, they must be converted to the H.264 compression format. For mobile, the safest file format is MPEG4 and MP4 (QuickTime) AVI, H.264/AVC, 3GP, and 3GPP.

As mentioned earlier in the chapter, it is important to designate common MIME types in your page files, but you must also do that for your rich media content. Figure 9.5 shows a list of the rich media MIME types that are accepted by the iPhone.

MIME Type	Description	Extensions
audio/3gpp	3GPP media	3gp, 3gpp
audio/3gpp2	3GPP2 media	3g2, 3gp2
audio/aiff audio/x-aiff	AIFF audio	aiff, aif, aifc, cdda
audio/amr	AMR audio	amr
audio/mp3 audio/mpeg3 audio/x-mp3 audio/x-mpeg3	MP3 audio	mp3, swa
audio/mp4	MPEG-4 media	mp4
audio/mpeg audio/x-mpeg	MPEG audio	mpeg, mpg, mp3, swa
audio/wav audio/x-wav	WAVE audio	wav,bwf
audio/x-m4a	AAC audio	m4a
audio/x-m4b	AAC audio book	m4b
audio/x-m4p	AAC audio (protected)	m4p
video/3gpp	3GPP media	3gp, 3gpp
video/3gpp2	3GPP2 media	3g2, 3gp2
video/mp4	MPEG-4 media	mp4
video/quicktime	QuickTime Movie	mov,qt,mqv
video/x-m4v	Video	m4v

Figure 9.5 *Media Mime Types accepted on the iPhone.*

Frames

Web developers use frames to bind content from two different pages into a new page. Two basic types of frames exist: HTML frames, otherwise known as framesets and included frames, or i-frames. Framesets have fallen out of vogue because of their negative impact on the user experience and search engine indexing; as mentioned earlier, they will not be accepted in HTML5. They generally enable you to scroll within a certain portion of the page without scrolling the entire page. If you are working with a website that uses HTML frames to display content, there is a good chance that only the main content on the page will display on a mobile phone, and any of the additional HTML frames that are being pulled in will not be displayed. As mentioned earlier, the iPhone never includes scroll bars, so HTML frames won't work on the iPhone.

Included frames, or i-frames, are still quite common in traditional Web-based coding and are more likely to render correctly, but they can still cause problems with mobile rendering. In many cases, if the browser on the phone doesn't support i-frames, the included element will simply not show. iPhones and Windows Mobile devices currently support i-frames, but many BlackBerries, Motorolas, and Nokias do not.

Everything You Need to Know About Transcoding

Transcoding is the process of updating the code of a traditional Web page on-the-fly, before it is rendered, to adapt the code to display better on a mobile phone. Transcoding utilities can be standalone or can be included as part of a mobile search engine experience after a user clicks from a listing in the mobile search results page.

A variety of different transcoding platforms exist, and they all work a bit differently. They can do various things, including the following:

- Resizing text and images that fit better on smaller mobile screens
- Breaking one page into multiple smaller pages that are easier for the mobile browser to download (pagination)
- Reformatting JavaScript navigation to improve its mobile usability
- Simplifying site color schemes and designs
- Stripping out some CSS styling

In some cases, companies can host transcoding software on their servers to use on their website whenever it is accessed from a mobile device. Transcoding services also can adapt and tweak the code of a company's website, shepherd the entire process, and then add the newly created files to the Web server, to be displayed when the site is accessed by a mobile phone. In other cases, the users can access a transcoding utility from their mobile phone and enter the URLs for pages that they would like to be transcoded one at a time. In most cases, though, transcoding is done by search engines, after a mobile search result is clicked.

Transcoding can be good if you don't have time to update your website for mobile viewers, but it can also be bad if the transcoding engine doesn't do a good job updating the site. When a user arrives on a transcoded page, it is not actually a page hosted on the website, but it is a temporary page, hosted by the transcoding utility. In some cases, pagination will happen at inopportune or illogical places on the page, images will not scale correctly, or problems will arise with page navigation. This causes problems for site tracking and analytics programs, and it also frequently prevents any activity that requires a secure server. To preview how your website might look when it is transcoded by Google, visit http://yeswap.com/gtran.html.

If you want to prevent transcoding, the best way to is to present mobile pages to the search engines so that their crawlers perceive no need to transcode the page and place a no-transform directive in your cache control header. You can also submit a mobile site map to the various search engines, and this should prevent the pages included in the mobile sitemap from being transcoded. That works in most cases

but if it doesn't, the next step is to include a link in the header to the mobile version of the page. The link should look like this:

```
<link rel="alternate" media="handheld" href="http://www.yourmobile-
site.com/" />
```

Replace `http://www.yourmobilesite.com/` with the location of the mobile page, whether it is on a subdomain, subdirectory, or separate domain.

Hosted Mobile Development Solutions

Depending on your content, it might make sense to use a hosted mobile website instead of actually updating your code base or changing your Web server settings. Having a hosted mobile Website is very similar to having transcoding software on your server, except that the transcoding software is part of a Web service hosted away from your primary site. A service like this usually places it on a domain that the transcoding service hosts, hence the designation "hosted mobile solution." Sometimes these services are also called mobile site builders.

Much like other transcoding options, hosted mobile websites are smaller, simplified versions of your existing website. Many services claim to "mobilize" your website, and the prices are usually reasonable, based on the number of pages, the number of monthly page views, and additional add-on services.

If you are using a service such as this, and your mobile website is hosted on a subdomain, away from your main domain, it is important to understand that the mobile website will not get any SEO benefit from your main domain because it is on a different domain. The good news is that the hosted mobile site might benefit from the historical value of the hosting company's domain, although because the other websites on that domain are likely about different topics, it might lack any search engine relevance.

If you want to use a hosted mobile solution but also want the mobile website to appear as if it is on your primary website's domain, the only way to do that is to change the DNS host in the records of the hosted mobile service provider's domain. The DNS, or Domain Name System, associates IP addresses of websites with domain names, much like a phone book.

Two of the newer and more comprehensive hosted mobile solutions are Mobify.me and MoFusePremium. Their service enables you to graphically organize the content of your website, create and update a handheld CSS, and preview the mobile site on an iPhone, Razr, BlackBerry, and Nokia phone simulators.

Directing Traffic with User Agent Detection

User agent detection is a means of adapting what type of content is served based on what type of device or "user agent" is accessing the website. This is the most effective means of selective degradation, mentioned earlier in the chapter. With user agent detection, a Webmaster can either hone the information served on a particular page based on the device that is accessing it, or redirect the user to a totally different URL that has been crafted specifically for that user agent.

In many cases, the most important user agent detection happens on the home page of your traditional website, but the functions should be included in all the pages throughout the website. The site should be set up to identify when a mobile user agent has reached the page and should send users directly to content that is optimized for a mobile experience. One of the quickest ways to make this update to your existing website is to add the scripts to your page templates so that, as new pages are added, the script is already included.

Mobile browser-detection code generators are available on the Web to help with this process. My favorite is DetectMobileBrowsers.mobi because it is simple to use. It enables you to specify how you want to treat iPhone, Android, Opera Mini, BlackBerry, PalmOS, and Windows Mobile device with an online form; then it generates the specific set of code that you requested. In each case, you can choose to treat the phone like a mobile device or like a traditional computer, or to send it to a specific URL.

The capability to send users to a specific URL is especially nice if you have multiple mobile websites set up for different types of browsers—for instance, if you have a set of mobile content for older text-based mobile browsers and a separate set of content for newer, more sophisticated mobile browsers. This particular code generator is also nice because it includes code that automatically sends any mobile device that is not specifically addressed in the redirect scheme to a specific page; it redirects all traditional user agents back to the traditional Web page, and all mobile user agents to the mobile version of the page. The capability to substitute content on the same page without changing URLs is also good for SEO because it avoids duplicate content issues.

More comprehensive instructions on DetectMobileBrowsers.mobi specify where and how the code must be added, and detail some server settings that you might need to change to make the settings run correctly in HTML pages. (If you use this utility, note that the code does not come free; you are expected to pay $50 for any commercial Website that uses the code.)

User agent detection is a term that was carried over from the traditional Web world, and it is a reference to detecting specific "devices." In the mobile world, there are so many possible devices that mobile handsets (user agents) are frequently grouped by

the mobile browser that they run. Thus, mobile user agent detection is often a combination of "user agent" detection and "browser" detection.

When it comes to user agent detection and redirection, usability studies have shown that users on the iPhone and the Android phone still prefer a mobile experience, despite the fact that their phones are capable of rendering entire traditional Web pages. The left-to-right scrolling and zooming required is still too cumbersome, so redirecting to a mobile-specific or iPhone-specific page is still desirable.

XML and RSS Mobile Websites

If you are working with a website that is primarily text based, such as a blog or a news website, one of the quickest ways to create a mobile version of your website is to use the RSS, ATOM, or XML feeds that might already in place. Feeds for each page can be ported directly to pages on a mobile subdomain or subdirectory. Service companies also can provide this expertise and further optimize the mobile experience. Because these feeds are text based, they output to mobile quite well, and very simple style sheets and graphics can be used to update the look of the feed.

How to Adjust for Mobile Screen Size

One of the most obvious changes you must make to a website when you are preparing it to be displayed on a mobile device is to update the resolution of the page to fit the screen. As with many other aspects of the mobile world, there is no standard screen size—and there will probably never be. Screen resolution is variable based on the type of phone and manufacturer.

According to Phillip Nagele of Mobile Zeitgeist, 96% of all phones have a screen size aspect ratio of between 3:4 and 4:3, which can make your life a bit easier. With a similar aspect ratio, content will scale in a similar way to fit different screens that have the same aspect ratio, even if they are a different size.

The main concern when developing mobile websites in terms of screen size is width. Some phones do allow right-to-left scrolling, but all mobile browsers are meant to scroll up and down. One of the best ways to easily accommodate a variety of screen widths is to use relative positioning and percents instead of absolute positioning and absolute pixel widths. This will allow your content to stretch and shrink to fit whatever screen it is being displayed on.

Now, as mobile phones become more interactive, some phones can be viewed in either landscape or portrait mode, reinforcing the point that your website should be flexible in the way it displays so that it can stretch and shrink to accommodate the screen, whether it is being displayed in landscape or portrait mode. If you are

designing a page specifically for the iPhone, you can also use the following code to specify the screen width when the phone is held in landscape or portrait view:

```
<!--[if !IE]>-->
<link media="only screen and (max-device-width: 480px)"
  rel="stylesheet" type="text/css" href="iphone.css"/>
<!--<![endif]
@media only screen and (max-device-width: 480px) {
  .navigation { display: none;  } }
<meta name="viewport" content="width=480; initial-scale=0.6666;
maximum-scale=1.0;
minimum-scale=0.6666" />
```

Screen size is always measured as "width × height," so 320×480 is the size of the screen when it is displayed in portrait mode, and 480×320 is the size of the screen when it is displayed in landscape mode. The most common mobile screen size is 320×480. Figure 9.6 shows how different screen sizes and resolutions compare.

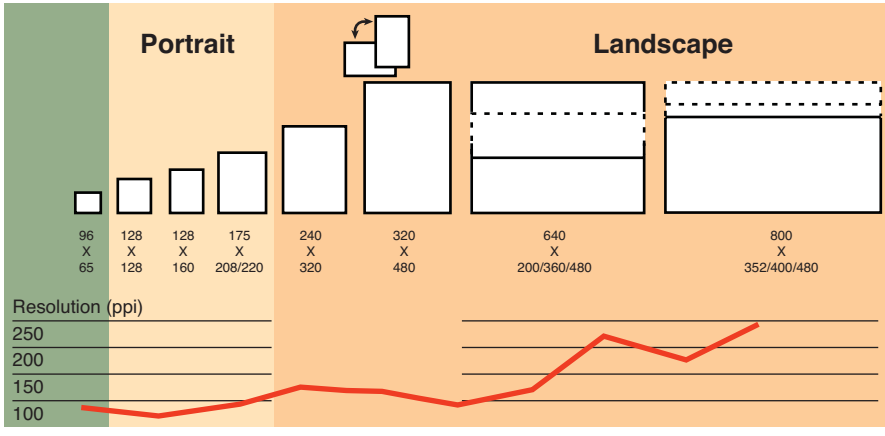

Figure 9.6 *Mobile screen resolution comparison.*

As phones have become more capable, screen sizes have gotten bigger and can accommodate more functionality. Figure 9.8 shows the change in the number of phones with different screen resolutions over time. As you can see, the 240×320 screen resolution has superseded the other popular screen resolutions and continues to grow. In many cases, handset manufacturers will come out with two different models of a phone: one with a smaller screen and a premium offering with a bigger

screen. The other two popular screen sizes represented in Figure 9.7 include both the standard and the premium screen sizes, with the 176×208/160 and the 128×128/220.

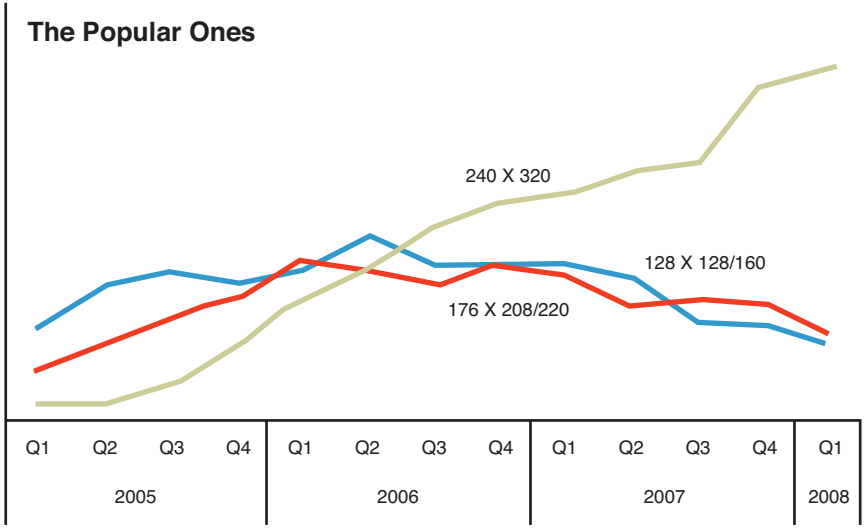

Figure 9.7 *Mobile screen resolution popularity over time.*

Page File Size

Mobile files should be as compact as possible, to ensure that mobile browsers can download and render them quickly. Small files also minimize the amount of charges viewers might incur on their phone bill for each download. As mentioned, clean, simple code is the most desirable and creates the fewest potential rendering problems. Because phones, browsers, and networks are constantly improving, no hard-and-fast rule governs the file size or page weight, other than "as small as possible."

Based on the growing availability of smart phones and the residual prominence of older, less capable phones, you should keep mobile pages between 20KB and 35KB apiece. A page that is just over 20KB will take about 1 second to download over WiFi, 2 seconds to download over a 3G network, and about 7 seconds to download over GPRS.

Many methods to limit the page size have been included in previous sections of this chapter. If your mobile pages are still too large for optimal mobile rendering, the next step might be to create a pagination scheme and break the content into multiple pages. If your website is small, you can do this by hand, but if you are working

with a bigger, more dynamic website, you should investigate different software and server scripts that can add pagination automatically. If you believe that landing on the second page of an article or blog post is not a good user experience, you can use the `robots.txt` file or the meta "NO INDEX" tag to block these pages from being included in search results.

What to Expect with Your Images

In the design process, it is important to consider how images will appear if the mobile browser misaligns them or rearranges them to fit on the smaller screen. This is quite common and can make it difficult for users to understand the message being conveyed. The best way to prevent this problem is to ensure that each image can stand on its own, without needing another image file directly adjacent to it in order to convey meaning. This way, if images are rearranged or misaligned, their message is still conveyed effectively. This is especially important if text is included in the images, because the message conveyed in the text could be totally lost when images are misaligned.

The following are some tips for using images in your mobile site:

- In general, do not rely on images for architectural or structural means in the design of your website. Especially avoid using image spacers, image maps, and background images. A reasonable chance exists that they will not be rendered where they were intended, so they will not provide any benefit and could cause confusion.
- The file size of your images is more important on mobile devices than it is on traditional computers because mobile phones have slower connection speeds and lower processing power. Compress all images as much as possible, to prevent them from slowing the load time or being blocked by proxies. Images that are a higher resolution than the screen is capable of displaying might be blocked or might hit the upper limit enforced by the carrier proxy, so always be sure to test higher-resolution images on different phones and different carrier networks.
- If you are creating pages or content that is adapted for a specific phone or screen resolution, it is important to code each image with a specific height and width, to maintain the phone-specific design you have created. In any other instance, it is important to code images with relative positioning and sizing so that they can stretch and shrink to adapt to different screen sizes and orientations.
- One of the simplest ways to limit the file size of your images is to keep them physically small in the design. Instead of having one or two large images, consider five or six medium and small images. The smaller the

image file sizes are, the less likely they will be blocked by proxies or will slow the load time of the email. For the best user experience, page file size (including dependents) should be 50–100KB, so ideally, each image should be between 10KB and 20KB. If you are targeting more sophisticated phones, the images can be larger, but the iPhone does not support .GIFs, .PNGs, or .TIFFs over 8MB, or .JPGs over 128MB.

- Using image maps on your pages can also cause problems in mobile rendering. Image maps are graphics where multiple areas on the image have been programmed with links. Unfortunately, when images are rescaled to fit on a mobile phone, the corresponding map of hotspots might not be rescaled at the same rate or in the same way, so there is a risk that the images and links will not match up when rendered on the phone. If you use image maps on your website, it is crucial to provide alternative methods of navigation on the mobile rendering of your site.
- This is discussed more in Chapter 10, but it is also important to include top keywords in your image filenames and Alt attributes. This will help the search engines understand the relevance of the images, and thus help them rank the page for the appropriate search queries.

Adapting Fonts for Mobile Viewing

The fonts that are rendered when you are viewing Web pages are actually stored on the computer or mobile handset that you are using to access the Web. For that reason, it is important to design your mobile Web pages in fonts that are generally available on mobile phones. This will prevent the phone browser from displaying your website in a default font, which could throw off the look and feel of your website.

In general, the most common fonts, on both the traditional Web and the mobile Web, are Arial, Times New Roman, Courier, Helvetica, and Verdana. In addition to those, if you are targeting just the iPhone, it supports the following fonts: American Typewriter, Arial, Arial Rounded MT Bold, Courier, Courier New, Georgia, Helvetica, Helvetica New, Marker Felt, Times New Roman, Trebuchet MS, Verdana, and Zapfino.

In your style sheet, you can designate one or two specific fonts that you want your website rendered in, and then end the instructions with a generic font family name, such as Sans Serif, Serif, or Monospace. The following code instructs the page to render first in Arial, if it is available; then in Helvetica, if Arial is not available; and then, if neither is available, to render in whatever sans-serif font is available:

```
p {font-family: Arial, Helvetica, sans-serif}
```

The size a font is rendered on a mobile phone is also particularly important. If text is rendered incorrectly, it can take up too much space or not be readable. You must use relative sizing instead of absolute pixel sizes. This ensures that the font adapts to fit the phone it is being displayed on.

The `font-size` attribute that can be used in style sheets, with simple designations such as `small`, `medium`, and `large`. You can also set font sizes as percents (between 1 and 100), or you can use what are known as HTML font intervals (between 1 and 7, with 1 representing the smallest font available on the phone and 7 representing the largest font on the phone). For instance, the HTML font interval for a medium-size font would be expressed in the style sheet as {font-size=4}.

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10

Mobile Search Engine Optimization

Internet access and Web search have changed the mobile marketing landscape. They are changing the way we think of mobile devices as a whole, making many things that were previously hard to access now instantly available.

Many of us have a hard time even remembering what we did or how we accessed the information we needed before the Internet. When computers were all (or mostly all) hooked up to the Internet, it improved their utility exponentially, and the same is true of mobile phones. Mobile phones provide infinitely more value when they are Web enabled. We will soon become accustomed to even more instant access to the endless wealth of knowledge that the Internet provides, to the point that some day we might not remember why we found mobile phones so useful when they just made calls.

Searching on mobile phones is still not as good of an experience as searching on a traditional computer, but mobile searchers are motivated searchers. A mobile

search is a clear indication of intent. People search on mobile phones because they need information immediately, and they cannot wait until they get back to their computers to find it. The good news for us as marketers is that the information people tend to search for usually informs an immediate purchase decision, meaning they are ready to spend money, and they need to know where to spend it.

Interestingly, when the mobile Web becomes faster and less clunky (and it will) marketers might have a more difficult time separating those searchers who are most likely to make a purchase from those who are merely surfing. The current mobile Web is slow and clunky and because of that, motivated purchasers are easier to spot. What happens when everyone with a smart phone can surf just for fun? How will the marketer sort the wheat from the chaff? Just food for thought...

Mobile search is one of the most useful utilities a mobile phone provides. Most activity on the traditional Internet begins with a search, and the same is true on the mobile phone. In both traditional and mobile computing, many people set a search engine to their home page. Searching is the way people find what they need. If you have a mobile website, it is critical that it rank well in mobile search engines.

Mobile search engine optimization (mSEO) is a very new tactic for improving the reach and impact that your company's website can have on a mobile phone. The strategies and tactics change rapidly as the mobile search algorithms change and as the mobile handset technology improves. A large portion of mobile SEO is actually architectural, as covered in Chapter 9, "Mobile Website

Development." With sound website architecture in place, mobile SEO becomes much easier. If the architecture is less than ideal, the effort to optimize a website becomes harder.

Many different mobile search engines exist, but in most cases, the top mobile search engines in any country are the same as the top traditional search engines in that country. In the United States, these are Google, Yahoo!, and MSN/Bing. For mobile marketing, we must understand mSEO.

How Do Mobile Search Engines Work?

Currently, the biggest difference between traditional search engine bots and mobile search engine bots is that the mobile bots evaluate your site as if it was being displayed on a mobile device. If the bots determine that your site will perform well on mobile devices, it will be ranked well in mobile search results. If they determine that your site will not perform well, it will probably not rank well in mobile search engines. Furthermore, mobile search engines can detect what type of mobile device you are searching from and, in some cases, rank sites according to how well those sites will perform on that specific device. If the site will perform well on the device, it has a better chance of ranking well in the search results shown on that device. This is just one of the factors that can affect your rankings. It makes sense, because the search engines do not want to rank sites that searchers will not be able to view on their particular mobile phone.

Traditional search engines and mobile search engines are very similar. Both have programs that called bots, spiders, or metacrawlers that are sent out to read and categorize the information available on the Internet. They categorize websites and Web pages so that they can be ranked in search results, based on their relationship to a searcher's query. In simple terms, the closer the relationship between the content on your site and the search query, the higher your website should rank.

Traditional search engines and mobile search engines both look at a variety of things to determine how websites should rank in search results. They store the information that their bots or crawlers find when they are crawling the Web in an index, much as books are indexed in a library. Every website in the search engine index has the potential to rank for a search query, but websites that are not in the search engine index will never rank for a search performed in that search engine.

The three major search engines have multiple indexes, which supplement the information in the main index. These additional indexes are used to categorize specific types of search results, such as local results, images, videos, and mobile results. When someone performs a search, the search engines use a complicated math equation, called an algorithm, to evaluate the information stored in the indexes. The algorithm mathematically compares different websites that are relevant to the search query, to determine how they will be ranked in search results. In many instances, the search results on both a traditional computer and a mobile phone consist of listings from the main index, as well as the top-ranking websites from the other indexes.

One of the most important points to understand about mobile search engines is that they frequently pull their results from both the traditional and the mobile search engine indexes. The mobile search engines provide mobile results whenever they can, but mobile pages must still compete against their traditional counterparts to rank well in most mobile searches. On smart phones this is true unless users click on the mobile link from the search page, which takes them to a set of mobile-only search results, in which no traditional results will compete. Most people assume that when they are searching from a mobile search engine, they will only be given mobile results, but that is not the case.

Even when a company has a specific mobile offering on its website, the traditional home page can outrank the mobile home page in mobile search. This is apparent with simple searches performed on a mobile phone (a BlackBerry Curve, in this case) for "coffee" and "weather." Both Starbucks and AccuWeather have mobile pages on their site (mobile.Starbucks.com and AccuWeather.com/m) and both are in the mobile index, but the traditional ".com" results are the ones listed in search results. Only when users click the mobile link from the search screen (meaning they are searching only the mobile index) do the mobile versions of the site rank in the results.

Basic Mobile SEO Best Practices

For the most part, mobile SEO is similar to traditional SEO. This chapter simply highlights the most important SEO strategies and how they are different when optimizing for mobile search results.

When search engine crawlers are on your website, they are evaluating on-site SEO factors, such as the text on the page, the site architecture, and the code that makes the site work. When Web crawlers are off your site, they also index things that are related to your website, including other websites linking to your website, editorial mentions of your website, and the popularity and success of your website in existing search results. Both mobile and traditional search engines look at on- and off-site ranking factors to determine how a website or a page should rank in search results.

On-site SEO Factors

The general rule of thumb is that you should include keywords wherever possible on your site without hurting the user experience or appearing overoptimized. It is important not to overdo it, so your best bet is to pick three different keyword phrases to target per page. Jill Whalen, CEO of High Rankings, suggests that one of the best ways to determine whether your website is overoptimized or spammy is to read it out loud. If it doesn't sound appropriate when it is read out loud, it is probably overoptimized.

Limiting the number of keyword phrases you target on a page is a good idea for a couple reasons:

- If you try to target too many keyword phrases on one page, it will begin to look overoptimized or spammy.
- If you use too many keywords, there is a good chance that the search engines will not be able to focus on any one of the keywords that you are targeting.

In addition to having visible text on your site describing your offerings, search engines determine your rankings based partially on the placement of keywords in the HTML code:

- **Title tag** (`<title>`)—The title tag displays as the blue link in search engine results pages and, thus, should describe what the page is about. In Google, it can be 67 characters long, including spaces, and should include the top three keyword phrases for the page. Anything after 67 characters is truncated, and the title appears in search results with an ellipses (…) where it was cut off (see Figure 10.1). In MSN Mobile and MSN Live Search Mobile, which both now redirect to m.Bing.com, only about 55 characters are displayed. Yahoo! Mobile, which in the United States is located at us.m.Yahoo.com, displays as many as 60 characters. (Because they are quite near to each other, the best bet is to optimize with Google in mind, as that's where the bulk of mobile search traffic comes from.) Ideally, each page on the website will have a different title tag. Instead of simply listing the keywords in this tag, it is important to form a complete and compelling thought so that people will want to click on the link from the search results. Including the word "mobile" in your title tag should encourage mobile clicks and make it more obvious to the search engines that the page is intended for mobile viewing.

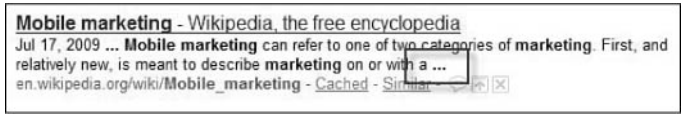

Figure 10.1 *This is a description tag of a Wikipedia search entry (as shown by Google) that has been truncated because it is more than 156 characters long.*

- **Keyword metatag** (`<META NAME="Keywords" CONTENT=`)—The keyword metatag is used to list keywords for which the page is relevant. At one time, search engines used the keyword metatag to help in rankings, but it was abused so much that it has almost all its value. Despite that, it is still a best practice to include it, so I recommend including only the top three keywords for each page in the tag. This way, if you ever wonder what keyword phrases you were targeting on a page, you can simply check the keyword metatag. This metatag should never be more than 200 characters long, including spaces.

- **Description metatag** (`<META NAME="DESCRIPTION" CONTENT=`)—The description metatag is pulled into the search results pages under the title tag. Although the content of the meta description tag does not have a direct affect on search engine rankings, it has a secondary effect because it helps create a high click-through rate on your search listing. The content of the description metatag also decreases the number of people who get to your site and immediately leave, otherwise known as the bounce rate. Click-through rate and bounce rate are both very important parts of the search engine algorithm.

  The description metatag should be no more than 156 characters, including spaces. It should be treated like ad copy and should include value propositions and a call to action. Again, including the word "mobile" toward the beginning of the tag helps searchers understand that your website is meant for mobile viewing, which will improve your click-through rate.

- **Heading tags** (`<H1><H2><H3>` etc.)—These tags help prioritize different text content on the website. Use them for headings and subheadings on the page. Search engines consider the H1 tag to be most important, and the value decreases though the H6 tag. Most SEOs concern themselves only with heading tags 1–3.

  It is a best practice to only have one H1 tag per page. Feel free to use the H2 and H3 tags more liberally, as long as they highlight important, optimized text on the page. Never include more H1 tags on the page than there are H2 tags, or more H2 tags than there are H3 tags, and so

on down the line. Including keywords in all the heading tags is a good idea. The length of a heading tag should never be longer than the length of a normal heading or subheading that would appear in the text on a page.

- **Alt tags** (`alt=`)—Alt text, alternative text, and alt attributes are used to describe images. In some cases, images might not appear when a website is viewed on a mobile phone; when they are missing, the alt text is displayed instead. These tags should be short but should be keyword-optimized and descriptive of the picture they are meant to represent.
- **Text link** (`A href=`)—Link text, or anchor text, is the part of a text link that is clickable, and it is usually indicated by text that is underlined and in blue. The anchor text of a text link passes search engine value to the page that it links to. This counts for links to pages within your website, as well as links to pages on other websites. When keywords are included in the anchor text of a link, they create relevance for the page they are pointing to for the particular phrase in the anchor text.

  Be careful to avoid making anchor text from irrelevant phrases such as "more info" and "click here." Doing so wastes your opportunity to create search engine value for another page.

In many instances, your search engine results will improve more dramatically when you include the same keyword phrases or their variations in more than one of these locations—for instance, in the title tag, alt tags, and heading tags. There appears to be a multiplier effect, whereby adding a keyword phrase to one element is a 1x improvement on rankings. Adding the same keyword phase to two elements could have a 3x or 4x improvement on rankings. Consider an example of how a Las Vegas hotel could include top keywords in multiple tags without appearing overoptimized:

- Title Tag: "Las Vegas Hotel and Casino: Cheap Rooms Just off the Strip"
- H1 Tag: "Las Vegas Strip Hotel & Casino"
- H2 Tag: "Cheap Hotel Rooms in Las Vegas"
- Alt Tag: "Luxury Hotel Room, Las Vegas, NV"
- Text link anchor text: "Las Vegas Hotel Room"

When you include different variations of the top three keywords phrases for the page in your visible page copy and all the HTML tags listed above, that page will be poised to rank well in both mobile and traditional search results.

It is also important to use keywords in the structural elements of the website, such as the domain name, filenames (including image names), and directory names or subdomain names. Search engines use the structure of your website and the paths or URLs of the pages to help them understand how sites should rank in search results. For example, a search engine would probably rank www.fishing.com/fishing-gear/hooks better than www.fishing.com/shop/index.cfc?submit=1&istartrow=1 for searches on "fishing equipment" because it can readily understand that "hooks" are a subset of "fishing gear."

For mobile rankings, it is important to use conventional mobile designations in your file structure. If the mobile aspect of your website is on a mobile subdomain, the subdomain should be called `m.` or `mobile`. If the mobile aspect of your website is on a subdirectory, it should be called `/m` or `/mobile`. These are the most common designations, and the search engines understand them as mobile designations. Chapter 9 discusses mobile subdomains and subdirectories more.

Offsite SEO Ranking Factors

In addition to including keywords in the text on your website, it is important to have links from other relevant websites pointing to your website, ideally with optimized anchor text. Remember, anchor text is the part of a text link that is clickable, and it is usually indicated by text that is underlined and in blue. In general, the more links you can drive from other websites to your website (from either traditional or mobile websites,) the better you will perform in search results. Because many mobile search results pages include traditional pages, this tactic is still relevant. It is especially true if the links are from sites that have a mobile designation in the file structure, have content that is somehow related to your content, or are considered authorities in their industry.

Links from images on other websites can also be valuable, although they are generally considered less valuable than text links. The best way to ensure that an image link from another website passes value to your website is to ensure that the image has a keyword-optimized alt tag and is surrounded by keyword-rich content. Images on your website that link to other pages on the site can also pass SEO value if the image filename and alt text use the top keywords for the page you are linking to.

The higher the quality and relevance of the site that is linking to you the more value it will give you in search results. Links from websites that have nothing to do with your website, or from websites that get minimal Web traffic or have low search engine rankings will pass minimal value. Whenever you can, encourage links from high quality sites that have content that is related to your product or service. The best way to encourage links such as that is to have good mobile content and a good

mobile user experience. Other than that, you can encourage links by publicizing your mobile content in press releases, news articles, blogs and offline media.

One word of caution: Search engines do not like it when companies pay for links or acquire links in a deceptive way. The best way to get high-quality links is to offer a high-quality product or service and promote it to people who are willing to write about it and link to the site. Purchasing links from link brokers can actually hurt your rankings. If you are interested in what the search engines—and, specifically, Google—believe is deceptive link acquisition, review the Google Webmaster Guidelines at www.google.com/support/webmasters.

In What Searches Do I Want My Mobile Site to Rank?

When talking about search, it is important to understand what types of mobile search engine queries are most valuable. In SEO, search queries are described as keywords or keyword phrases. As you determine the keywords you should target with your mobile site, it is important to think like a potential customer and avoid jargon that your customers might not know. This sounds simple, but it can be harder than you think. A thought leader in the Internet marketing space, Frederick Markini, gives the following example:

> A well known lending institution had taken it upon themselves to optimize their site for all different searches related to lending: personal lending, commercial lending, subprime lending, lending rate, residential lending, etc. They were proud of their work, and began to rank well for searches related to lending, but they were still disappointed with the traffic and conversions that their site they were getting.
>
> What went wrong? They were not thinking like a potential customer. Potential customers were not searching for "lending." Potential customers wanted to "borrow" and were searching for terms related to "borrowing."

While bots can understand code and layout, they have little appreciation for aesthetics. Search engine bots evaluate only what they can read, so your best bet to rank well in both mobile and traditional search engines is with text. You must determine what phrases people might type into a search engine when they are looking for the product or service that you offer. Again, Markini illustrates the point quite well (paraphrased here):

> A well known candle company that sold scented jar candles also worked to improve their search engine rankings. The candles they sold were called "house warmers," playing on the idea that a nicely-scented

home would create a feeling of "warmth." Since the candles were described on the site as "house warmers" rather than "jar candles," the traffic to their website suffered.

The search engine had no idea that the company was actually selling "scented candles" or "jar candles" because it was not written on the site. It only knew that they sold "house warmers," and while the idea of creating warmth in a home may have been appealing, it is not what they were searching for; they were searching for "scented candles" or "jar candles." Adjusting their product names and descriptions helped increase the Web traffic dramatically.

The differences between a mobile keyword strategy and a traditional keyword strategy are slight. Some reports show that mobile searchers use longer keyword searches, and others show the opposite. In general, mobile keywords are action oriented and are more likely to include verbs, as in "find dry cleaner" or "download ringtone." They also are frequently location specific, such as when the searcher is looking for a retail outlet or destination. Including verbs and location information, such as your neighborhood and zip code, near your other keywords will improve your visibility in mobile search engines. In some cases, branded searches can be more common in the mobile world, since mobile is used less for researching a product and more for immediate action, such as "find McDonalds Denver."

Targeting Long-Tail Keyword Phrases

When choosing your top keywords, be sure to think in terms of phrases instead of single keywords. Searchers have become savvy enough to understand that broad, one-word searches, such as "pizza," will rarely yield the desired result except in a map-based search. Optimizing for keyword combinations or phrases is more realistic and enables you to narrow the number of companies that you are competing against for search engine rankings.

The Long Tail theory, popularized and described by Chris Anderson in the book *The Long Tail: Why the Future of Business Is Selling Less of More* (2006), can be applied to the keyword selection for your website. The model basically shows that in a market with a high freedom of choice, such as the Internet, 80% of your website traffic will come from very specific and descriptive "long-tail" terms, whereas only 20% will come from short, generic "head" or "short-tail" terms.

With this in mind, it is generally best to target two or three word phrases in your SEO. A good example of this strategy is a store that sells golf clubs in Miami. Instead of targeting "golf," this company should target keyword phrases such as "Miami golf shop," "golf store Miami," "Miami golf clubs," and so on. The natural benefit of targeting two- and three-word phrases is that when you start to rank and

get traffic for the longer keyword phrases such as "golf store miami," you will also begin to rank better for shorter versions of the keyword phrases, such as "golf store," "golf shop," and "Miami golf."

In some cases, you might run into problems with words that have multiple meanings, such as "Miami golf club" or even "Miami golf clubs"; people could be searching for these terms when they are looking for a golf course but are not interested in finding a retail outlet for golf clubs. This might seem problematic, but it is actually a great opportunity for the retailer to garner more mobile Web traffic and gain visibility to their targeted audience. By creating a resource page on their site that lists the locations of golf courses, or "miami golf clubs," they can actually create search engine relevance for the keywords they are targeting, potentially get links from other websites that appreciate the resource, drive sales and awareness for their actual product offering, and help build creditability with their clientele.

It is a good idea to optimize for more specific keywords on pages that offer more specific information. "Miami golf shop" might be a good keyword for the home page of the store, but when specific products are offered online, those pages should be optimized with different variations of the product name and description—for example, "Nike Unitized Tiempo," "Nike 34 putter," and "stainless steel putter."

Mobile Keyword Research

Tools are available to help you choose the best keywords for your site and discover new keywords based on historical searches that have been performed in the search engines. Some of these tools are free, and some have a small one-time cost or an ongoing subscription fee associated with them.

The best tool available for mobile keyword research is part of Google AdWords, Google's advertising platform. It is a bit difficult to access, but it is free and high quality, so it is worth the struggle.

1. The first thing that you must do is log into a Google account. If you don't have an account with Google, you can create an account with Google AdWords simply by signing up at http://adwords.google.com. If you have an existing Gmail or AdWords account, you can just use that.
2. When you are logged into Google, simply click My Account in the upper-right corner of the Google home page; on the next page, click AdWords.
3. If you already have a campaign set up in AdWords, you can go directly to a page that enables you to add new AdGroups. If you don't have a PPC campaign set up, you must create a mock campaign to access the keyword tool.

4. To set up a mock account, first go to the Home screen in AdWords, locate Active Campaigns, and, in the drop-down, choose Keyword Targeted (as shown in Figure 10.2).

Figure 10.2 *Choosing a keyword targeted campaign.*

5. This takes you to the page where you establish the Campaign Settings. Although this has nothing to do with mobile SEO or keyword selection, you must do this to access the tool. In your mock campaign, you can choose any settings you want, but take my advice and set the Daily Budget to $0.01, just to ensure that the campaign doesn't accidentally go live and start costing you money.
6. Click Save and Continue at the bottom of the page, and on the next page you can create AdGroups.
7. Click the Create New AdGroup button. It should take you to a page where you can set up rules for that particular AdGroup. Again, this is just a mock campaign, so any settings will do, but keep the budgets at $0.01.
8. You will need to write mock ad copy and put your domain name in the Display and Destination URL fields. Then be sure to put at least one keyword in the list. The one I added for this example is "poker." When you are done, click Save AdGroup.
9. When the AdGroup is set up, you are taken to a page showing a graph and some information about the mock campaign. Click the Ads tab. (Although this tab is visible earlier in the process, it is not clickable until a campaign is set up.)
10. From the next page, click the New Ad drop-down and select Mobile Ad (see Figure 10.3).

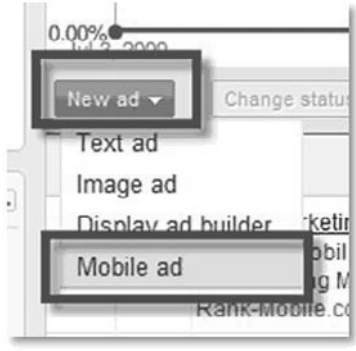

Figure 10.3 *Select Mobile Ad.*

11. Next, AdWords takes you to a page that is meant for developing a keyword list. Under the AdGroups heading, click Mock Campaign. New options appear on the right site of the screen. In the text above the white box, click Keyword Tool, as shown in Figure 10.4). (Yes, I know this is a lot of work—you're almost done!)

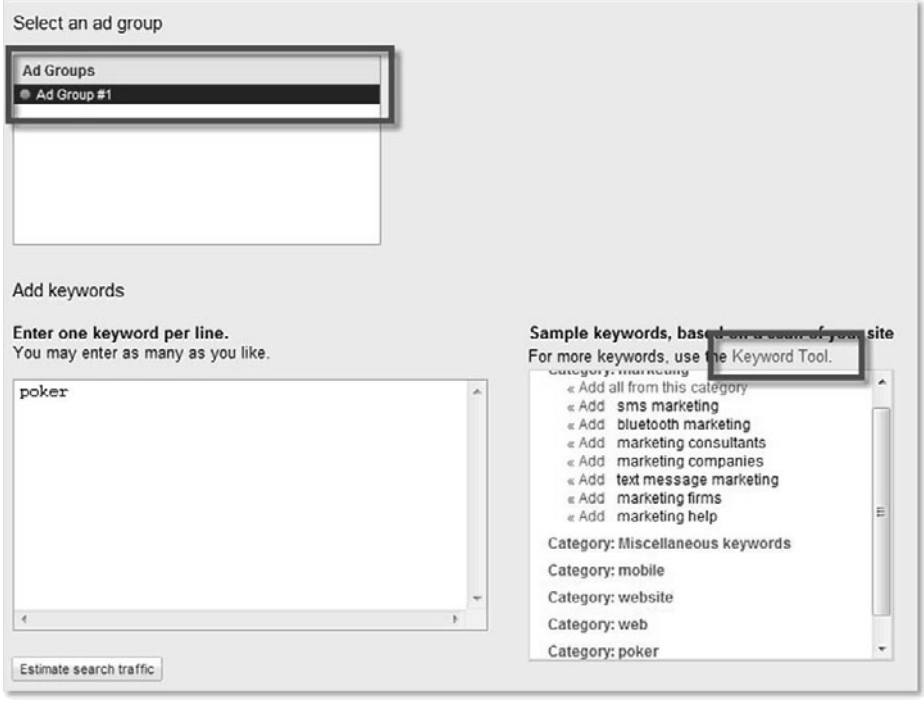

Figure 10.4 *Starting the Keyword Tool.*

12. Now, you move to a page that looks exactly like the traditional Google AdWords Keyword Tool, except for one small modification: the sentence that reads "Results Are Tailored to Mobile Searches" (see Figure 10.5)." After you land on the Mobile Keyword Tool Start page, enter one keyword or phrase per line in the box on the right side of the page, and then select Get Keyword Ideas.

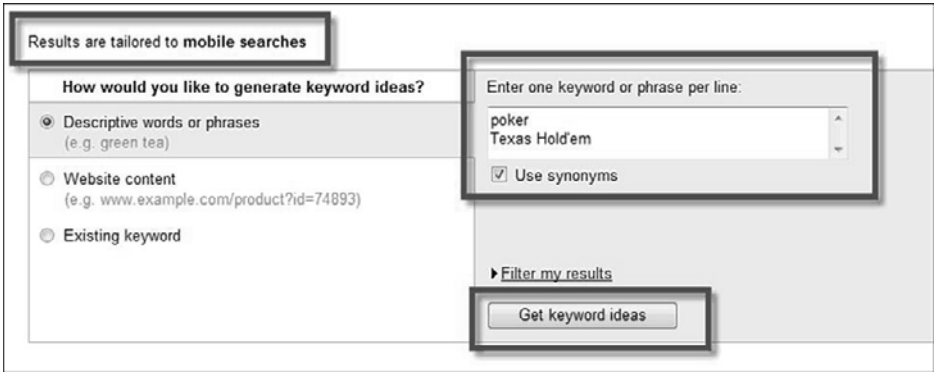

Figure 10.5 *This is where you add your keywords.*

13. This takes you to a long list of related keywords and statistics that describe the volume of Google Mobile searches associated with the keyword. If you are not seeing the full complement of mobile keyword statistics shown in Figure 10.6, use the Choose Columns to Display drop-down menu in the upper-right corner and pick Show All.

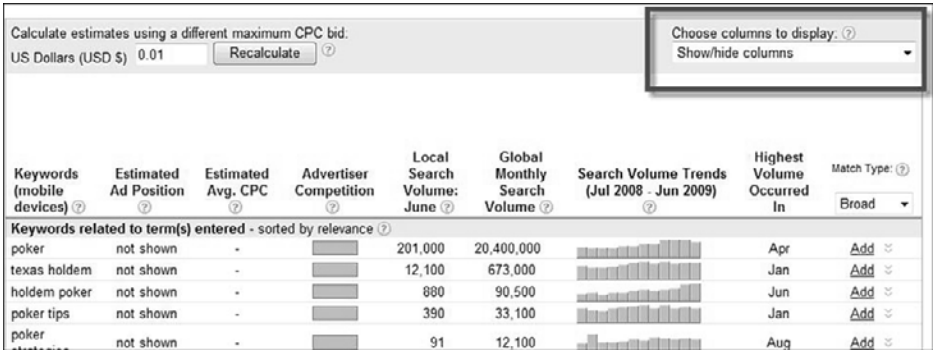

Figure 10.6 *Here you can see how the keywords you have chosen perform.*

14. You can now see a number of keywords that might be related to your product or service. In terms of mobile SEO, you will also see Local Search Volume and Global Monthly Search Volume, as well as the Search Volume Trends and the month with the highest search volume. The other columns are relevant only if you are setting up a paid advertising campaign in AdWords, which is covered in Chapter 5, "Mobile Advertising." Your goal is to choose relevant keyword terms that have a high search volume.

15. To create a list, simply click the Add button next to the keywords you want to add. After you have developed a comprehensive list in the right column, you can click Export to export the list in a variety of different file types, including Excel and CSV files. If you think you might have missed a segment of keywords, simply click the Back button and add a word that you think will trigger that segment of keywords; then click Get Keyword Ideas again.

Everyone in the mobile community is hoping Google will make this Keyword Tool publicly available without an AdWords account so we don't have to go through the hassle of setting up a mock account, but that has yet to happen. The good news is that when you have the mock campaign set up, you can use it again and again, so you have to go through the hassle only once.

Other mobile keyword research tools are available, but although they are generally much easier to access, they are less robust and possibly even less accurate. After the Google Mobile Keyword Tool, the next best option for mobile keyword research is to use the Keyword Suggest tools from the various search engines on your mobile phone. These are accessed by performing searches in your mobile browser.

Whenever you use your phone to do a search on Google or Yahoo!, as you begin to type in a query, you will see a drop-down menu of similar searches. These are meant to allow users to select one of the options instead of having to finish typing their search term, but they are also helpful to mobile marketers looking to develop a keyword list because the lists order the keywords by query volume.

Add high-volume queries that relate to your product or service. If you are using Google and prefer to do keyword research from your traditional computer, you can go to http://google.com/m/html/search.html to get the same results.

You can also access Related Searches from both Google and Yahoo! mobile to build your SEO keyword list. Related Searches will not always appear, but if you are searching for something that is slightly obscure, the search engines will include alternative query ideas or Related Searches at the bottom of the mobile search results page. You can do this on a mobile phone or from the mobile search portal accessed from your traditional computer. Figure 10.7 shows an example using YahooOneSearch on the iPhone.

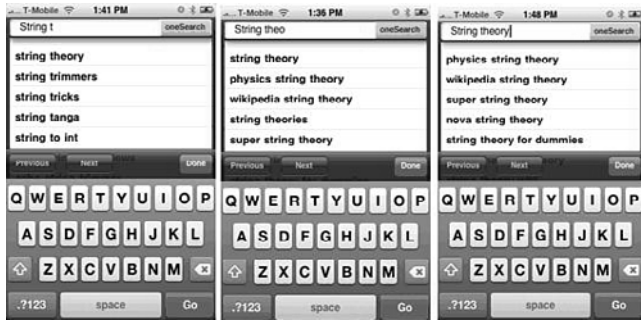

Figure 10.7 *Yahoo! Keyword Suggest utility for example searches on "String Theory."'*

To show how it works, I did a search in Google Mobile for my name, "cindy krum," and it did not return any Related Searches at the bottom of the page. This is because the search was quite straight-forward and there were no related topics that it assumed I might have missed.

Alternately, I did a search for "string theory," which is much more complicated and has the potential to return results on a number of related topics. For this search, Google returned the traditional results with the following Related Searches listed at the bottom of the page: string theory simplified, string theory video, m theory, chaos theory, theory of superconductivity, dark matter, time travel, and black holes (see Figure 10.8). Google has determined that all these searches are related to my search for "string theory" and, thus, could be valuable keywords for a site about string theory.

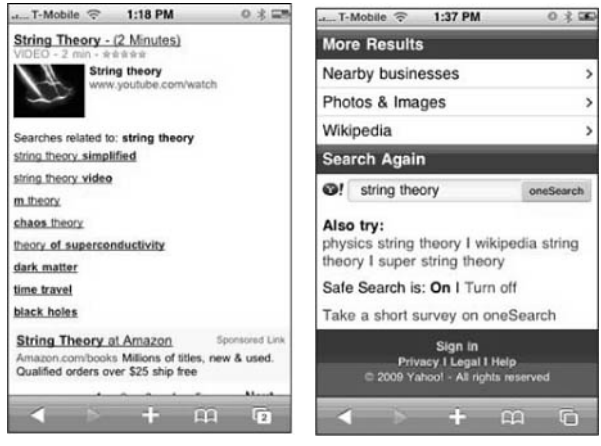

Figure 10.8 *Recommended searches on "string theory" from Google and Yahoo!.*

If you have a limited product set or category, as with the "Miami golf clubs" example, you can start with a list of about 50 keyword phrases. If you have a much larger product offering or many locations or departments, as with a Walmart department store, you might need to develop multiple keyword lists for each category of products you offer on the site.

Find Out How You Rank on Your Top Keywords

After you have developed a list of keywords that you want to rank for, it is important to know how well you already rank for them in search results. It is a good idea to set a benchmark and routinely record how your website is performing in mobile search engines. If you already have a website, the first thing you might do is go to your phone and perform searches to see where your website ranks on the first page. This will give you a good basic idea of how your website is performing in mobile search results. However, it is not comprehensive or 100% representative because the search engines, especially Google, are adjusting results based on several factors, as described in the following sections.

Phone Specifications

Search engines can detect the handset when the search is sent, and as mentioned previously, the search engines adapt mobile search results based on the phone that is doing the searching. They do this to ensure that the websites that are ranked well in the search results will be usable on the phone that is doing the searching. Although it is unclear how heavily this factors into the mobile search algorithm, it is definitely a factor. That means that doing searches from different phones could yield different results, so research on just one handset might not be entirely representative of how your website is ranking in all mobile searches.

Personalization

Search engines (especially Google) can also use your previous search behavior to modify the search results presented to you. If you are logged into a Google account on your phone and have clicked on one search listing quite frequently, it will move to the top of search results when you are personally searching for it; similarly, if you have never clicked on a result that ranks quite well, it will move lower in the results. This customization means that other searchers might receive different search results whenever they are logged in to perform a search. On the traditional Web, Google has even made this a more active process, including buttons so that you can promote websites higher in results, demote results to move them lower in the results, or totally delete results from your result set.

This ability to customize search results means that there are even more potential variations in how your website will rank in other people's search results. If you are doing your own mobile searching to find out how your website ranks, it is important to log out of your Google account, to ensure that your frequent visits to your website are not impacting the rankings Google is showing you. Right now, not many people are signing into their Google account from their phone, but this could change soon. When Google allows you to associate a mobile phone number with your Google account or other search applications, you might be functionally logged in all the time.

Localization

Google also adjusts search results based on the location of the searcher, so someone searching in New York will get different results than someone searching in LA; more dramatically, someone searching in Houston might get different results than someone searching in Denver, even if they are both searching from Google.com. This means that, again, just because you are ranking well in one place does not necessarily mean that you are ranking well in another place. Currently, your location must be manually input into all browser-based search engines, but as more mobile phones incorporate location detection, based on cell towers, WiFi, or GPS, this information likely will become more deeply integrated into mobile search results. This change could happen quite quickly, but currently the mobile search algorithm is no more specific about location than the traditional algorithm, and it actually might not respond to it at all unless the location is manually input. The only exception arises when you are doing a map-based search from Google Maps, in which case, it plots your current location and orders results based on relevance and proximity, and when you are using the Google iPhone application, which automatically detects your location.

Tracking Mobile SEO and Keyword Rankings

When you are working with a traditional website, you can use a variety of tools to find out how your website is ranking in various search engines. Although these tools have no way of accounting for the problems with personalization or localization, they are a quick way to see how your website is performing in traditional search results over time. Because none of those tools currently report on mobile search engine rankings, you have to do searches by hand or rely on your analytics to see what keywords are driving the most traffic.

The main disadvantage to using analytics instead of actual search results to measure the effectiveness of your SEO efforts is that analytics show you only how you are doing on keywords that are performing well, because they records information only after someone clicks from a search result to your website. If a keyword is

ranking but no one is clicking on it, analytics won't ever tell you that. Similarly, if you are not ranking at all on an important keyword, analytics won't specifically bring that to your attention.

When doing keyword reporting for a traditional website, one tool available, called Enquisite Optimizer, can help eliminate some of the questions present with other keyword-reporting platforms. Enquisite Optimizer reports on all the different ranking positions and physical locations a keyword is in when it was clicked from a search result; although it can't tell you whether the person was logged into a Google account, it can tell you where that person located when performing the search. The Enquisite team is currently working to add the capability to segment the results by mobile browser or user agent, so in the future, we might be able to understand, based on the mobile browser, how keywords are ranking in different places and on different mobile browsers using this tool.

Until the new mobile features are available on Enquisite Optimizer, you can use other analytics programs, such as Google Analytics, to see how much traffic each of your top keywords is generating from mobile devices. In Google Analytics, you can segment traffic to include only organic searches or only iPhone searches so that it will show you what keywords are driving traffic in organic searches from iPhones.

If you are working with other phones, you can use the browser/operating system segmentation options in Google Analytics to drill down to find out how your keywords are performing on specific phones. You can also create Advanced Segments in Google Analytics to group all mobile searches together or set up individual segments for different mobile browsers, operating systems, and screen resolutions, and then easily move among the results for specific handsets. This is covered in more detail in Chapter 3, "Mobile Targeting and Tracking."

If your segments are set up correctly, you can then gather information about what keywords are driving traffic from specific phones and ascertain from that how well your website is ranking in searches performed on the various phones. If your website is not exclusively mobile, the best way to really understand this information is to aggregate all the mobile information and look at the mobile results as a whole.

If you have a Google Webmaster Tools account, you can also go there to find out what terms Google has determined are relevant for your site, what terms are driving the most impressions for your site, and what terms are generating the highest click-through from search results. Chapter 9 also covers Google Webmaster Tools.

When you have determined how you will evaluate keyword performance, it is important to routinely generate a report for how your website is performing and track changes in the rankings or traffic associated with your top keywords. If your website is targeting both traditional and mobile computers, you will want to record the performance on both.

Whenever you make a change to the website, it is important to track how it affects your keyword rankings in the search engines. If you are using the same website for both mobile and traditional traffic, you should track how both results are affected. If you are making major changes to the website, you will need to report on your keyword rankings daily, but if you are making less significant changes to the website, you can report on keyword fluctuations weekly. If the site does not change much, it might even be okay to run keyword reports monthly, if you are not very concerned about search engine traffic.

Advanced Mobile SEO Best Practices

The differences between mobile and traditional SEO strategies and tactics all stem from the fact that different crawlers are indexing and evaluating your website as if it was being displayed on a mobile phone. It is essentially the same model, with slightly different parts and different algorithms determining how the website will be ranked. That being said, some more advanced SEO strategies are specific to mobile search engine optimization.

Search engines index the Web page by page, but they also evaluate the power and historical value of a domain name or website as a whole. A domain name that has been around for a long time, ranks well, and gets consistent traffic is considered more valuable than a new domain that has little history, few rankings, or little traffic. Each page on a website is judged independently, but pages on a more established domain will generally perform better than the same page on a less established domain.

Because the search engines index the Web based on individual pages or URLs, you must have only one URL for each unique page on the website. Some websites get into trouble when multiple versions of one page are indexed in the search engine, either because the servers are set up incorrectly or because multiple URLs are being dynamically generated and used to represent just one page.

Having multiple indexable URLs that represent only one page of content is a problem we call duplicate content, or DUST (which stands for duplicate URL, same text). This is a problem for traditional and mobile search engines because it crowds their indexes. Generally, the search engines will pick only one of the duplicate results to rank in search results. The best practice is to ensure a 1:1 ratio between the number of URLs that will resolve in a browser and the number of pages you would like to rank in search results.

In some instances, server settings or ModRewrite programs can be used to eliminate extra versions of a page that renders in a browser address bar. A good example is htt://mysite.com and http://www.mysite.com. These addresses both bring up the same page, but could confuse the search engines, because one page has two

addresses. In this situation, you would want to see which of the addresses ranks better in search engines, and redirect or automatically re-write the other one to appear as the primary or 'canonical' one.

Alternately, a canonical meta tag can be included on the secondary page, indicating the primary or canonical page there. That tag looks like this: <link rel="canonical" href=http://www.mysite.com/> and it explains that, in this case, the primary or canonical version of the page is the one with the 'www,' and this tag would be placed on the page that doesn't have the 'www' included in the url.

In the mobile world, things can get more complex, because some websites may have on page for the traditional rendering of the website, and another page for the mobile rendering of the website. They may even have one version of the traditional rendering of the website, and multiple versions of the mobile rendering of the website. In that case, you may need to use a mobile robots.txt, to explain to the search engine robots which content they should be crawling and indexing.

Mobile Robots.txt

When compared to their traditional counterparts, mobile websites are frequently at a disadvantage for search engine ranking. Even without taking duplicate content issues into account, traditional websites have more history, links, and traffic recorded within the search engines. If you have mobile-specific pages on a mobile subdomain or subdirectory, the mobile pages of the site generally have less history and traffic, and fewer links credited to the pages than the corresponding traditional pages do. Thus, frequently the traditional pages of the site outrank the mobile pages of the site, even in mobile search.

This is obviously one of the more complex aspects of ranking that the search engines must face, but until they get better at understanding when to rank the traditional pages and when to rank the mobile pages, we can use a `robots.txt` file to give them instructions. A `robots.txt` file is stored in the root directory of your website, and it is used to control how the metacrawlers, otherwise known as robots or just bots, index and evaluate your site. Because there are both mobile and traditional bots evaluating the Web, you can tell the traditional bots to index one set of pages and tell the mobile bots to index a different set of pages. For mobile pages hosted on a subdirectory, a `robots.txt` file prevents the traditional bots from indexing the mobile content and prevents the mobile bots from indexing the traditional content.

If you have separate mobile pages on a subdomain, you need two `robots.txt` files: one for the main domain and one for the subdomain.

Creating and maintaining appropriate `robots.txt` files can be quite complicated, and if these files are coded incorrectly, they can severely impact your rankings. It is

best to have someone who understands this doing work on your `robots.txt` file. It is also always a good idea to run your `robots.txt` file through Google's Webmaster Tools Robots.txt Checker to ensure that it is working the way it should. (See www.google.com/support/webmasters/bin/answer.py?answer=35237.)

Mobile Site Map

In addition to submitting a traditional site map to the search engines, you should submit a mobile site map that lists all pages on your site that should be listed as mobile friendly in the index.

Site maps are another tool for ensuring that your site is indexed correctly and for avoiding duplicate content. Generate site maps for both your mobile and traditional Web content, and submit them both through Google Webmaster tools. Mobile site maps are very similar to traditional site maps. The main differences are in the configuration files that must be created with the site map if you are using Google's site map generator. You can use a website called SiteMaps.org to generate a traditional site map that can be submitted to all the major engines, but for a mobile site map, it is best to use Google site map generator.

To see an example of a mobile site map, visit www.google.com/mobilesitemap.xml.

A separate config file is needed for each markup language, and you should generate site maps for each config file separately. When you are finished, you should have a different site map for each of the coding languages your mobile site is written in and named separately.

When pages serve multiple markup languages, they should be included in multiple site maps. This process can be quite complex, so sometimes it is best to leave this part of the project to the technicians or the IT team. They can use filters to specify which URLs to include and exclude for each markup language. (For more information about creating the configuration file, visit https://www.google.com/webmasters/tools/docs/en/sitemap-generator.html.)

You should upload your mobile site map to the highest-level directory that you want the mobile search engines to crawl; in many cases, this is in the `/m` directory. If your mobile content is hosted on a subdomain, upload the mobile site map there. After the site maps are uploaded to the root directory, you can use Google Webmaster Tools to submit them directly to Google. You can submit mobile site maps within the primary site's Webmaster Tools account, or you can set up separate Webmaster Tools accounts for each subdirectory or subdomain.

In any instance, you should also link from the `robots.txt` file to both the mobile and traditional site maps. Google will direct you through a process to verify that the site is yours. After the site is verified in Google Webmaster Tools and you have

uploaded a site map, you can check the Diagnostics section of the dashboard to see if the mobile metacrawler has detected any errors.

Mobile Search Engine Submissions

Mobile search engines are always looking for more mobile content to index and rank in mobile search results, so they have established submission pages where you can submit your website to be included in their search results. Search engine submission used to be a powerful strategy in traditional SEO efforts, but it has become less effective because so many webmasters and SEOs attempted to 'game' the system by getting their websites listed or linked multiple times in the directories. Luckily, it is still useful for mobile SEO because the mobile search engines are still looking for valuable mobile-friendly content to index and rank.

Submitting your website on a mobile search engine page is much less sophisticated than submitting a mobile site map, and it does not ensure that your site will be added, but it can still be a valuable strategy for improving mobile search engine rankings quickly or encouraging mobile Web crawlers to visit your site more frequently.

Mobile Directory Submission

Directories are utility websites designed to help people find websites that are relevant to specific topics. They are organized in much the same way that a Yellow Pages book might be organized, dividing things by categories and subcategories. Within each category and subcategory are links to websites with more information on the topic. Submitting to directories has also lost much of its impact on traditional results, but it can still be a good way to drive mobile traffic and search engine rankings.

Listings in top mobile directories help drive mobile traffic to the mobile website, and improve the mobile search engines' capability to index your website and understand what your website is about. They can also provide a good source of optimized mobile links, which should make your website appear more relevant to the search engines. A list of mobile directories and their submission pages is included at the end of this chapter.

Leveraging Universal and Blended Mobile Search Results

The top three search engines for both mobile and traditional Web content are Google, Yahoo!, and MSN. These three search engines all have a primary index, where they keep records of most of the content on the Web, but they also have

other indexes for special types of content, such as business listings, images, videos, and news. In both mobile and traditional searches, the search engines will mix information from their other indexes with the traditional listings. In the SEO community, these are called blended results because they blend results for a variety of different indexes.

Blended results are actually quite common in mobile search because the search engines are trying to minimize the number of clicks it takes a searcher to get to the information needed. They try to anticipate what type of result the searcher is looking for. For example, when someone searches for "California Pizza Kitchen," the search engines will probably think they are looking for a specific restaurant location and return results from the local index with addresses and phone numbers before providing traditional links to Web pages.

Similarly, if you search for a movie title that is currently in the theaters, the search engines will direct you to listings for local theaters and the show times for the movie you searched for, before providing you traditional website links. The blended elements can appear at the top of the page, or mixed in with other results lower on the page. They might also include links to movie reviews, and YouTube clips of the movie trailer, but can also include images, news articles, or product listings.

Different tactics are used for ranking well in the blended results. Universal search results are pulled into traditional search results pages based on their rank and relevance in the specific index, such as Google News or Yahoo! Images. If you rank well in those searches, it is much more likely that your content—images, videos, local listings, news, or anything else—will be pulled in the blended results from traditional or mobile search.

Universal search results are included in mobile search results at a different rate, based on the handset that submits the query. Although optimizing your website for universal search results and mobile universal search results adds to the work you have to do to optimize your website for mobile and blended searches, there are clear benefits. Blended results are usually much more visual than traditional search results, and they include things such as star rankings and video or image previews. These are eminently more clickable than a traditional Web listing in a search result. It is also generally easier to rank well for specific keywords in the specific indexes because fewer websites are competing there.

Ranking well in blended search results can be a particularly appealing strategy because fewer websites are competing for rankings in the type-specific indexes than in the overall Web index. The following example illustrates this point quite well.

If you were marketing the movie *Ice Age 3,* if you do a search for "Ice Age," you would see the number of possible Google results for the various indexes as follows:

Google Web Results: 92,500,000 results

Google Images: 16,100,000 results

Google Video: 27,300

Google News: 10,185 results

Google Movie Listings: 40 results

Top-ranking items from each of these indexes showed on the first page of search results for the search term "Ice Age," despite the comparatively low threshold of competition in the different indexes.They were top results from the various indexes, pulled into the first page of Web-at-large search results. Ranking well in universal results is a bit like cutting in line; when you are ranked well in the smaller index, you are automatically put into the top listings in the big index. Many articles and tutorials have been written about ranking well in blended search results on the traditional Web, and for now, those tactics are basically the same for the mobile Web. A brief overview of important strategies is included below that cover local results, business listings as well as news, image and video results.

Local Results and Business Listings

Submit all your physical locations to the local directory for each of the top search engines, as well as online business directories such as SuperPages and MapQuest. Local search results are ranked based on traditional ranking factors, as well as their proximity to the searcher's location or, in some cases, the city center. As geolocation factors become more closely integrated with mobile search, the actual area code of the phone doing the searching might even be integrated when other methods of geolocation are unavailable. Local results are also heavily weighted on the star rankings, so be sure that all your local business listings have reviews and comments from satisfied customers.

Include as much information as you can when you are submitting your business to the various search engines and directories. Pictures, testimonials, hours of operation, and other details will all make it more likely that you will get a customer from a particular listing, and all are quite relevant to a mobile audience. Business citations, listings, and links from other online and mobile directories also do a lot to improve how your local results and business listings rank in mobile search engines.

You can do other things on your own website to encourage the search engine bots to automatically add your site to their local index.

- Have phone numbers and physical addresses listed on your website in text that is viewable to the crawler.

- You can also use microformats called HCards to help you include your location data in a format that is universally understood by all search engines.
- Include as much information as you can in your HCard, and don't forget to include your geographic coordinates (latitude and longitude). These will be important as the GPS becomes more closely integrated into mobile search.

Figure 10.9 shows example search results for the same term in three popular search engines.

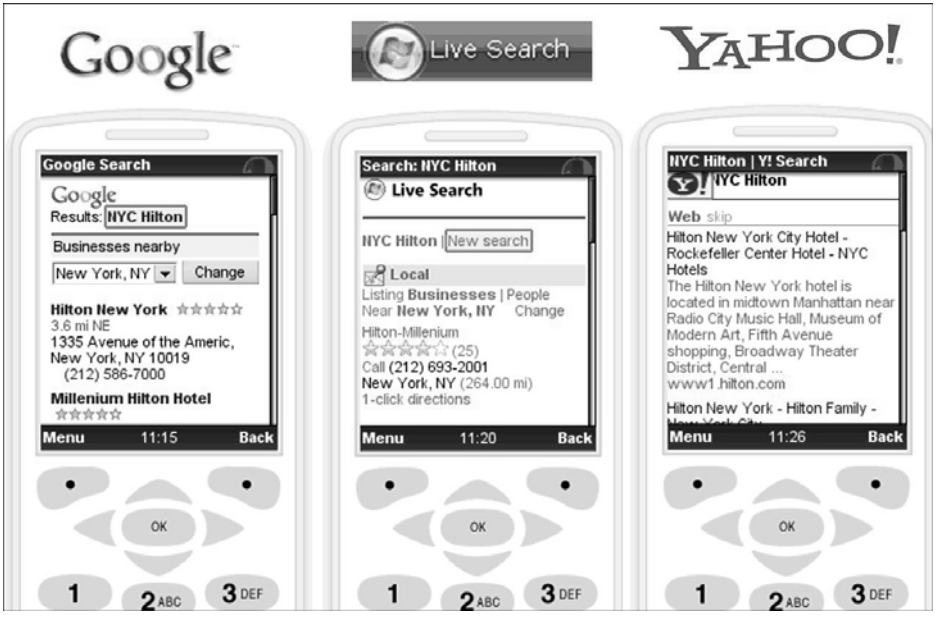

Figure 10.9 *Example search results for "NYC Hilton" in Google, MSN Live Search, and Yahoo! One Search.*

News Results

If your website frequently distributes news articles or press releases, it is important to be ranked in News search results. The first step is to request that your Web content be included in the search engines' News index. All the major search engines accept XML feeds or News site map to help them discover and rank news stories quickly, so developing one of these and submitting it to the search engines is quite important.

After you have requested inclusion and submitted the feed, you must think about the content being submitted. To rank well for searches in Google News, the articles and press releases you are submitting must include relevant keywords, just as in a page on your site. Always include the top keywords that you would like articles to rank for in the title, headings, and subheadings of the articles or press releases you are submitting.

News results are also ranked based on aggregate editorial interest, or the idea that articles should be ordered based partially on the number of people who will be interested in a story. A local story that is picked up by a couple news wires will generally not be ranked as well as an internationally relevant story that is picked up and sent out via a large number of wires. Similarly, search engines also attempt to determine the original source of an article based on the citations or links back to the original, otherwise known as citation or attribution rank.

Image Results

All the top search engines also have indexes for cataloging images from the Web. To rank well in these search results, use alternative text, otherwise known as alt tags, in the HTML of the page to describe all your images. Include the top keywords for the page in the alt tags and the text content that surrounds the image. You should also use top keywords when you are naming your files. For instance, instead of naming the image of a fish tank as `tank.jpg`, you should name it `fish-tank-5x2.jpg`. This tactic will help ensure that the search engines understand what the image represents and help them index the site appropriately.

Video Results

If you have videos on your website, it is important to get them ranking in video search engines, including YouTube and Google Video. Submitting your videos and using a video site map will help the search engines find and index the videos on your website more efficiently. These video file types can be included in your Google Video Site Map:

- `.mpg`
- `mpeg`
- `.mp4`
- `.mov`
- `.wmv`
- `.asf`
- `.avi`
- `.ra`
- `.ram`
- `.rm`
- `.flv`

The most common mobile video formats are 3pg and mp4. Flash (`.flv`) video files frequently will not work, so try to save your videos as `.mp4` or `.3pg` if you want them to rank well in mobile results.

Most video-editing software suites allow the author of a video to embed information about the video in the file properties. This information includes titles, descriptions, and sometimes even keywords. The search engines can access these directly from the video file when they are crawling and indexing it. Just as when you are optimizing a Web page, you should also include your top keywords in the video file properties itself before it is submitted to the search engines in a video site map.

You can use the video site map to include or add descriptions and other metadata for each of your videos that you are submitting so that the search engines have an easier time understanding what the videos are about. They also enable you to link to a thumbnail image of the video that will show in the search results. If you don't provide your own thumbnail images, the engine will generate its own thumbnails, and they might not be as compelling or interesting as you would hope when they show up in search results.

Application Search

Downloadable applications are becoming much more popular and, in some instances, are replacing mobile search engines. Search applications allow users to submit a query just like in a mobile search engine, but they usually focus on a specific type of product or service and provide some added value over the results in a traditional search engine. Table 10.1 shows some examples of top mobile search applications.

If there are mobile search applications related to your industry, product, or service, it is important for your website or company listing to rank well in searches within those mobile applications. Frequently, top mobile search applications have promotional websites where you can get insight into how the application receives and ranks the results it provides. In some cases, the owner of the application will have created a unique index, such as the SuperPages mobile application or the Flickr mobile application. In other cases, such as UrbanSpoon, the results are a combination of search data from Yelp, Yahoo!, and the site submission on their own website.

When you have determined how to get into the search application result, it is important to determine what makes some results rank higher or lower than other results. Because applications are meant to be interactive and personal, rankings are frequently highly weighted on user ratings and reviews, as well as popularity. Each time you make a change to your mobile website or even a mobile landing page, check whether and how it has affected your rankings in the mobile search applications for your niche.

Table 10.1 Top Mobile Search Applications

Local Dining:	**Recipes:**	**Friend:**
Urban Spoon	AllRecipies.com	Facebook
Open Table	BigOven	MySpace
MetroMix	iFoodAssistant	WPMobile
Local Business:	**Real Estate:**	Loopt
Around Me	Trulia	WhosHere
Yelp	For Sale by Owner	**Products:**
YPMobile	**Videos:**	eBay
Slifter	Truveo	Amazon
Jobs:	YouTube	Near By Me Now
Job Compass	**Images:**	Is it Me
iJobs	JuiceCaster	
Now Hiring	PhotoBucket	
	Flickr	
	Picas	

Alternative Input Search

Search on mobile phones is unique because users are not limited to typing their query into a text-input field to perform a search. Mobile phones have more options for inputting a search, such as voice, image, and SMS messaging. More alternative search applications for phones are being developed every day, but some of the top alternative-query-input mobile search applications are listed here:

- **RedLazer**—A one-dimensional bar-code reader that uses the camera in a phone to scan a bar code and return price comparison search results.
- **Shazam**—Application that listens to a song that is playing and searches a database of songs based on the audio. After probable song matches are identified, they are presented in search results with reviews and the opportunity to purchase the song.

- **Goog411**—Application that listens to you say a query on a phone call and sends you a text with a link to your search results.
- **Google Voice Search**—Application that Takes voice queries directly from an iPhone and submits them over the Web to return live Web results to the iPhone within the application.
- **SnapTell**—An image-recognition search application for CDs, DVDs, and video games. Users search by submitting a picture of the cover of a CD, DVD, or video game. Search results are presented to the user with descriptions, ratings, reviews, links for price comparison, and links to buy the item online.
- **EverNote**—Image, voice, and text recognition search that enables you to search your own database of files on your phone, whether they are images you have saved, voice recordings you have made, or text you have entered.

These types of search applications rank results in a variety of different ways. As a marketer, you should determine whether alternative input search engines address your target market and work with the search applications to understand how the results are ranked or prioritized. In any instance, search query results are pulled from an index, or multiple indexes, and the results are ranked based on a variety of factors—some that you can control and others that you can't. In many cases, the index that the search application uses might be supplemented with other indexes or search engines, so you might be able to rank well in the alternative input search engine by ranking well in the search engine being used to supplement application results.

11

Integrating Mobile Marketing with On- and Offline Marketing

Although mobile marketing is powerful, it is not meant to stand alone. The goal of mobile marketing is generally not to engage the user exclusively on the mobile device, but to continually engage the user and keep your brand top-of-mind when they are out, living their lives. This kind of active and frequent engagement is also known as participatory marketing. When mobile marketing is integrated into your on- and offline marketing campaigns, it can become participatory and be fully utilized to create a deep and lasting bond. Integrating mobile marketing into both on- and offline marketing campaigns also helps create long-term value in the customer relationship.

Mobile marketing closes the gap between on- and offline marketing. Studies have shown that most people have to be exposed to a brand or brand name at least eight times before they are cognitively aware of it, and another two times before it actually enters their consideration set when they are making a purchase decision. In the United States it is also speculated that more than 50% of major offline purchases are researched on the Internet first, so appearing on the mobile phone when people are in stores comparing products can be very important.

The right mobile marketing can create a bridge between your customers online and offline experience (online for the research phase and offline for the actual purchase). The lag time between research and the actual purchase decision can be long and usually is directly related to the cost of the item being purchased. The brand awareness created by an integrated participatory marketing campaign can be a key influencer to keep the purchase decision and the brand in the consideration set. This chapter covers how you can integrate mobile marketing with your existing on- and offline campaigns to create a truly participatory marketing campaign.

Unified Messaging with Varied Communication

Before you begin planning how you will integrate your mobile marketing effort with your other existing marketing strategies, it is important to create a theme that will develop a unified feel for all your marketing channels. This should go above and beyond just adhering to your existing branding standards: You must have a theme, slogan, or promotion to tie everything together. If your brand already has something like that in place, there's no need to make major adjustments to incorporate mobile marketing—you can just use your mobile marketing as an extension of what you already have. On the other hand, if your on- and offline marketing is not well synced, you should work to create a more unified feel. Your mobile marketing

campaign will lose value if participants get confused or don't see the connection between the on- and offline communication.

The simplest way to give your marketing campaign a more unified feel is to use similar imagery across all the different marketing channels. Although the imagery can be the same across the different venues, it is better to include a variety of different images that have the same look, feel, subject, and tone. Additionally, it is important to have a similar call to action, hook, or slogan that reminds viewers of your other marketing message that they have seen before. For companies such as Nike, this could be quite easy, using something like "Just Do It—Turn On Your Bluetooth," or "Just Do It—Text In to Win!" Other companies might have to be a bit more creative.

It is important to create a cohesive, well-themed campaign, but it is also important to add value through all the different interactions that are possible with the campaign. The basic messaging should be the same, but the specific communication should relate directly to the channel that is delivering it. Be sure to somehow add value to each of the different types of communication that are available, not only by promoting your content, but by giving consumers something extra. This can come in the form of a tip of the day or an additional discount simply for engaging with your marketing material. Above all, the different points of communication should come together to tell a cohesive brand story.

Integrating Mobile with Offline Marketing

The most distinct advantage to mobile marketing is that the mobile phone goes with your customers wherever they are. It is a constant connection between you and your target market. Mobile marketing is uniquely able to build out traditional offline advertising with a mobile prompt that is immediately actionable, trackable, and measurable.

The integration opportunities can be divided into three different groups—print media, broadcast media, and offline display. Previous chapters covered many of these strategies, so I will focus here on how to make the different media work together. Some strategies, such as mobile email optimization, mobile video, and mobile social networking, are new, so they are covered at a deeper level in this chapter.

Integrating with Print Media

One of the biggest and cheapest mobile integration opportunities is with print. This can be as simple as encouraging viewers to visit your website on a mobile phone or to text a code to participate in a survey or contest or to receive information.

Integrating print marketing with mobile marketing can be achieved with the following assets:

- Newspapers
- Magazines
- Catalogs
- Flyers
- Letterhead
- Tickets
- Handouts
- Bills
- Shipping inserts
- Warranty papers
- Menus
- Envelopes
- Greeting cards
- Receipts
- Account statements
- Instructions
- Business cards
- Brochures
- Cups
- Plates
- Napkins
- Investor information
- Product packaging

One of the best ways to integrate mobile marketing is to work with existing print campaigns in newspapers, magazines, and catalogs. In these, you can include a mobile call to action that is related to the advertisement, instructions for downloading mobile coupons so that customers don't have to clip one from the paper, or promotional text that advertises the benefits of your mobile campaign and explains how to interact with existing location-based advertisements.

Companies can also incorporate mobile marketing into their billing and direct-mail marketing. They can allow recipients to sign up for mobile alerts when their bill is due or their account status has changed. If they ship products to customers, they can also allow them to text in to get the status of their shipment, or encourage them to opt in for special deals or discounts related to what they purchased.

Another way to incorporate mobile marketing is to include mobile calls to action or QR codes into your product packaging or temporary service items, such as paper plates, cups, and napkins. In Japan, McDonald's has done a great job, incorporating QR codes on their Happy Meals and burger wrappers (see Figure 11.1).

Other paper assets, such as letterhead , envelopes, flyers, and business cards, can be used to send people to your mobile website or encourage them to text a short code to get a vCard with important contact information or to get a vCal of your company's events (see Figures 11.2 and 11.3).

Figure 11.1 *QR codes used on McDonald's Happy Meals (left) and burger wrappers in Japan. Photos courtesy of mobile.kaywa.com.*

Figure 11.2 *A QR Code used in Ralph Lauren Print Ad. Photo courtesy of mobile.kaywa.com.*

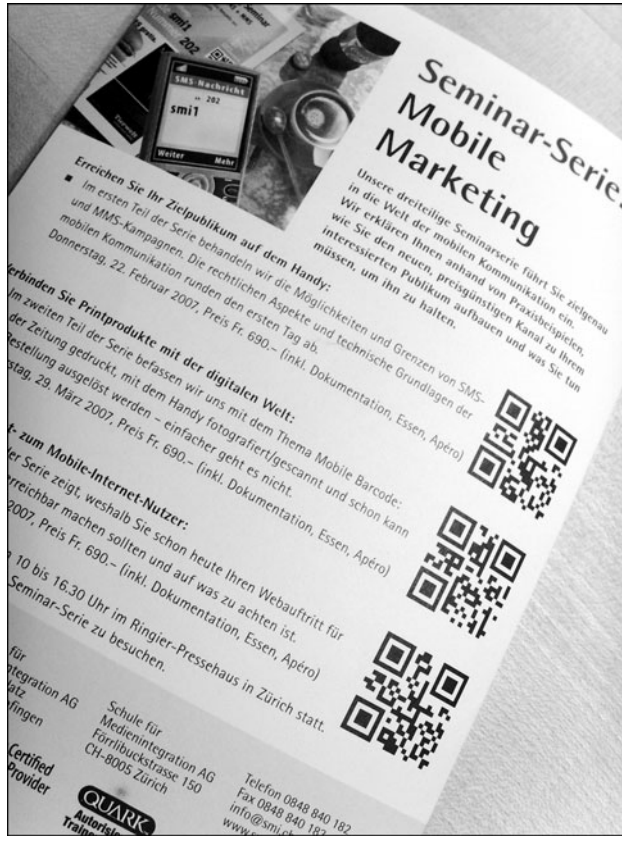

Figure 11.3 *A QR Code used in a conference handbook. Photo courtesy of mobile.kaywa.com.*

Integrating with Broadcast Media

Whenever you are using a broadcast medium, you have the opportunity to loop a mobile marketing call to action into the campaign. Encourage people to communicate with a short code, through SMS; download an application; or simply visit your mobile site. The most common broadcast media include the following:

- TV
- IP TV
- Streaming TV
- Radio
- Digital and HD radio
- Digital signage
- Movies
- Television and cinema trailers

TV

With the advent of Digital Video Recorders (DVRs), many people are fast-forwarding though commercials, so it is important to find other ways to reach them when they are watching TV. When you loop TV into your participatory marketing campaign, you can make up for the ever-diminishing viewership of TV commercial advertising.

Integrating Twitter feeds during news programs and talk shows is a simple way to loop in mobile communication. The History Channel was one of the first U.S. stations to do a good job of integrating mobile calls to action during programming. During many of their TV shows, a small banner appears on the screen, encouraging viewers to text in a short code to get an alert whenever a new episode of the current show is about to air (see Figure 11.4). You can also promote TV shows with offline Bluetooth display advertising, as they did for *Man vs. Wild,* to help improve viewership.

Figure 11.4 *The History Channel provides short codes that viewers can text so that they receive notices when new episodes of a favored show will air. Photos courtesy of mobile.kaywa.com.*

American Idol was the first U.S. TV show to launch a mainstream text-messaging campaign, in which they allowed viewers to call or text in their votes to help determine which contestants would move on to the next round. Similarly, the show *Deal or No Deal* created a game that ran before every commercial, in which viewers could guess which one of six suitcases was holding $1,000,000; if they guessed correctly, they were entered into a contest to win the money.

Radio

If you are marketing for a radio station, you can encourage listeners to text in questions and comments about the show or have listeners text in song requests. You can also allow them to sign up to receive text alerts to find out when their favorite show or song is about to play, or send them information about concerts or events that the radio station will be sponsoring. You can also send listeners a link to your show where they can get a downloadable mobile music-streaming application to play your show. You could also provide links to where listeners can download the songs played on your show. Alternately, you can work with show sponsors to include a mobile couponing element with their advertising package, and send listeners mobile coupons, discounts, or promotions from show sponsors during the spot. In the United States, National Public Radio (NPR) does a great job integrating this kind of marketing into their programming.

If you are a mobile marketer who is interested in leveraging existing radio advertising campaigns, you can integrate a mobile call to action into your commercials. Encourage people to text in to get a discount, or have them send a mobile picture of them enjoying your product, to enter a contest. You can also use a radio commercial to promote any highly visible location-based marketing and explain how users can interact with it when they are nearby. Marketers can advertise existing mobile applications that your company has created to help improve the number of downloads and spread brand awareness.

Location-Based Broadcasts

Location-based broadcasts include digital signage, Bluetooth, WiFi, near field, and Infrared broadcasts. These technologies can be used to send marketing messages to users based on their physical location. Bluetooth beacons and WiFi routers can be used to broadcast marketing messages to people when they enter the range of the beacon. These are usually used to drive foot traffic into a brick-and-mortar store. Frequently, the message includes a coupon or promotion to incentivize a specific call to action. Mobile service providers can also leverage location information from GPS and cell tower triangulation to send targeted, location-specific messages alerts to subscribers, based on their location. In some countries, this type of communication is also being used to send regional safety and weather alerts. Chapter 6, "Mobile Promotion and Location-Based Marketing," covers location-based marketing more thoroughly.

Companies such as McDonald's are also testing location-based mobile marketing at the point of purchase by creating what they call the SMS Lounge. This German test

presented a call to action at the point of purchase for the visitor to sign up and receive an instant coupon. Subsequently, visitors were offered the opportunity to opt in to future coupons sent via text message. Since its launch in July 2007, more than 10,000 participants have used this McDonald's service, and the brand has achieved response rates of up to 29%.

Integrating mobile marketing with location-based marketing is especially powerful because it can reach people both when they are short on time and need answers quickly, and when they have time to fill and need quick entertainment. You can use location-based marketing to interact with your demographic in a number of ways. The simplest method is to integrate a mobile call to action in billboards, banners, posters, and other outdoor advertising channels. You can take this integration to the next level by offering interactive SMS prompts, or even including QR codes or Bluetooth beacons on your advertisement. By promoting a specific mobile offering that is relevant to people in a particular location, you engage your audience and give them information that is uniquely valuable to them at that moment in time.

Figures 11.5 through 11.7 are good examples of how QR codes can be integrated into billboards and outdoor advertising. Figure 11.5 shows an ad for a Mini Cooper, Figure 11.6 shows a large billboard for a Swiss bank Zurcher Kantonalbank and finally Figure 11.7 features an image of Father Maurice Tournay, a Swiss missionary. In each of these ads, QR codes are included so that passersby can use their mobile phones to get more information on the topic. Information passed by QR codes from stationary advertising can be uniform, or can be tailored to the specific location of the advertisement. For instance, the Mini Cooper ad could give the viewer more information about the Mini Cooper, or it could give them directions from the billboard to the nearest dealership.

Similar to QR codes, image-recognition software, such as one created by Mobot, can be used to prompt mobile downloads. In this scenario, a company submits its print and display advertising to be scanned by a back-end database. That image is stored, and whenever someone takes a picture of the billboard and sends it in, the image-recognition software queries the database, to determine what advertisement it is; the database then sends a response to the phone, much like a QR code would.

The mobile marketing channel needs support from other media to be successful, so it is crucial to integrate it with your on- and offline marketing efforts. Appropriate integration will ensure that you are reaching your target audience effectively and efficiently, when they are most likely to interact with your marketing message.

Figure 11.5 *QR code used in a billboard for the Mini Cooper.*

Figure 11.6 *QR code integration in a billboard for Zurcher Kantonalbank.*

Figure 11.7 *QR code integration in a lighted bus stop billboard for Maurice Tornay.*

Integrating Mobile with Online Marketing

Integrating a mobile marketing campaign with an online marketing campaign is frequently overlooked but often quite simple. In most cases, it simply means promoting your mobile content on your traditional site. If you think about it, the people visiting your traditional website are possibly the most targeted audience to which you have access. Because they are visiting your website from a traditional computer, you already know that they are interested in whatever product or service you have to offer, and their propensity to consume content on your mobile site is much higher. Additionally, many consumers will turn to the Web to find out more information about your mobile offerings, if they missed a short code or are unclear about the offer. Your mobile marketing campaign needs to take into account:

- Websites
- Micro-sites
- Web directories
- Mobile advertising
- Mobile PPC
- Mobile SEO
- Mobile applications
- Podcasts
- Online video
- Mobile social networks
- Email

When you are integrating online mobile marketing with your existing website, you must ensure that your mobile offering won't do any harm to your traditional Web offering. If you are changing existing pages or their style sheets, you should track the effect of those changes on your search engine rankings, traffic, click-through,

and conversion rates on the site. If you are duplicating your website and placing it on a mobile subdomain or subdirectory, or on a separate top-level domain, then monitoring search engine rankings and Web traffic is even more important because you might be presenting duplicate content to the search engines. For more information about the impact of duplicate content and how to prevent it, read Chapter 10, "Mobile Search Engine Optimization."

Mobile Websites, Micro-Sites, and Web Directories

One of the most important parts of an integrated, participatory mobile marketing campaign is to ensure that no part of your marketing effort stands alone. Your website is a great way to bring things together because it allows you to not only promote the same things that are being promoted in other channels, but also promote and explain the uses and benefits of the mobile interaction. Any marketing collateral that is being displayed in other locations online or offline should also be included on your website. This includes, but is not limited to, offline display advertising, radio commercials, location-based campaigns, and video. Downloads that are sent via QR codes or mobile downloads should also be available on your website.

The best way to inform customers that you have a mobile-friendly website is to include information about it on the home page of your traditional site. It can just be a small banner or informative button encouraging visitors to also visit your website on their mobile phone. If the content you offer on the mobile site is different than the content you offer on your traditional site, it is also a good idea to tell people what type of information they can get on the mobile site and explain the benefits.

If you have a particularly long URL or you think users might see value in viewing those particular pages on their mobile phone, include a feature that allows users to send a text message to their phone (or a friend's phone), with a link to the page. This is also a good idea if you offer customizable information such as driving directions or recipes. This allows users to view the information when they need it, without printing it. This is a great way to keep users engaged while they are not at their computer, and also a great way to collect phone numbers for subsequent SMS marketing campaigns. Of course, before you use the phone numbers the user will have to opt-in to your marketing messages, but this is discussed more in other sections of the book.

You should also use your website or campaign-specific micro-sites to link to other instances of your brand online. If you have social network profiles, mobile social network profiles, podcasts, videos, or downloadable apps, they should all be promoted and linked from the website. Encourage website visitors to opt in not only to email alerts, but also to mobile alerts and text messages from your website. Any product or service that you are providing in the mobile world should also be available on your traditional website. Providing good images of your mobile campaign

will also enable bloggers and journalists to create more compelling posts about your offering because they will be able to use the high-quality images that you provide instead of having to search for good images, create their own images, or leave images out altogether.

If you have both a mobile and a traditional website offering, it is important to let viewers move between the two sites easily. This usually involves including a button or link at the top of all pages, allowing viewers to specify what type of device they are viewing their website on. If you have content or information that you think viewers might want to access on their mobile phone, include a "Send to My Phone" form that texts them a link to the page they're on.

Mobile SEO

Whether you have a mobile-specific website or mobile micro-sites, or are using your existing website to reach your mobile audience, it is important that your search campaigns be representative of the integrated campaign you're running. Although you should always do a good job of targeting your top keywords and brand name, it is also great to incorporate specific elements of your integrated campaign into your SEO campaign.

If you have created specific pages to host mobile downloads from other media, always include the tagline or hook for the campaign in places search engine spiders will see—title lines, heading tags, and Alt tags on images. This will help people who are searching for more information about the campaign or who want Web access to things they've seen on other on- or offline media.

When you are optimizing pages to promote your mobile campaign, don't forget to include the media name in the keywords. For instance, if you are running a TV commercial to promote a downloadable mobile insurance application, be sure to include the words "TV commercial" on that page when you are optimizing the page. Similarly, if you have a series of Bluetooth-enabled posters in the London Tube stations, include the words "London Tube" and "Bluetooth posters" in your SEO copy.

Learn more about mobile SEO in Chapter 10.

Mobile Display and Pay-Per-Click Advertising

If you are doing display or PPC advertising (on mobile or traditional platforms), always promote your mobile content. Instead of linking to the home page of your mobile or traditional website, you can link directly to an optimized download page, application, video, or coupon. If you are doing PPC, include the name of your application and the platform it is built for, as well as the hook or call to action, in your

keyword lists. Similarly, if you are doing display advertising, it might be a good idea to include a screen shot or illustration from your mobile application or website.

Mobile Applications

Mobile applications can drive a lot of awareness and even revenue for your company. In some cases, they will even be the central focus of your integrated mobile marketing campaign. Your mobile application and market place listing should always reflect the look and feel of the other collateral that is driving downloads, such as TV commercials and billboards.

As mentioned in Chapter 8, "Mobile Applications," it is important to optimize your download pages in the App Store to rank in the App Store search engine and promote your application with bloggers. Include viral incentives within your applications, perhaps by offering points or credits to users who recommend the application to a friend, and by allowing them to send text messages to friends inviting them to download the application. Also use traditional online social networks to promote your applications and other mobile offerings by creating fan clubs and social applications to encourage downloads, or posting mobile calls to action as tweets or Facebook posts.

Online Images, Videos, and Podcasts

Companies that create stellar images, videos, or podcasts usually put a lot of resources into making those assets great. To get the most out of your marketing dollar, be sure to make those assets available online. This means making them available on your website, the mobile Web, and vertical search engines that index images, videos, or audio files.

- **Video**—If you have TV commercials or other videos promoting your integrated campaign, submit them to YouTube, Google Video, SingingFish, Blinkx, Loomia, and MetaCafe. Also make them available for download in various traditional formats, such as MP4 video, QuickTime (MOV), and Windows Media Video (WMV); offer them in mobile video file types as well, such as Silverlight and 3GPP. When you're doing this, make sure that you use the appropriate MIME type in the file properties, to ensure that the file is downloaded and rendered appropriately.
- **Images**—If you have images, submit them to Google Image search, Yahoo! Image Search, MSN Live Image Search, Ask Image Search, Alta Vista Image Search, Pic Search, Pixy, and Imagery. This will help ensure that your images are widely available if people are searching for them online or on their mobile phones. It also should help your rankings for the pages containing the original images.

- **Audio**—If you have audio content, submit it as a podcast to iTunes, but also make it available in QuickTime (MOV) and Windows Media Video (WMV) formats, and consider offering it in mobile file types such as AAC and AMR. Make files available for download as MP3, WAV, and MIDI files (and, as always, use the appropriate MIME type in the file properties). It is also a good idea to submit files to traditional search engines such as Yahoo! Audio Search, Lycos Music Search, Alta Vista Audio Search, PodScope, Blinkx, SingingFish, and Loomia.

If you make these files available online, include a button to send download links to a user's phone via text message. This is a simple and easy way to drive mobile downloads and to make the experience more seamless for your users. When users input their number into the form field, an SMS or MMS can be sent to them immediately so that they're not forced to re-create the search that got them to the traditional Web page in the first place. You can also send them a follow-up text, asking if they would like to receive alerts or coupons on their mobile phone.

Mobile Social Networks

Social networking is a term we use to describe the activity of locating and interacting with other people who have interests that are similar to your own. Before the Internet, social networking happened in person, at mixers and other locations that were conducive to creating conversations. The Internet has taken social networking to another level by allowing people to interact socially, or to "socially network," without being tied to a specific location or time. Although online social networking is a very powerful force, online connections are rarely as strong or meaningful as in-person connections.

Mobile social networks provide an increased level of interactivity and personalization when compared to their traditional online counterparts. Many mobile social networks are location aware and allow users to discover and network with people in their immediate vicinity. In Asian countries, where mobile social networking is more common, content consumptions vary by age—80% of mobile social networking is done by those younger than age 34; news consumption on mobile handsets skews older.

The portable nature of the cellphone adds to the allure of mobile social networking because it enables users to connect with others online without having to be at a computer, and offers the potential for users to connect immediately with people offline as well. Although this type of social interaction is fascinating, it can be difficult for marketers to determine the best approach for marketing in these new venues.

U.S. vs. International Mobile Social Networking

The United States is distinctly behind the rest of the world in terms of adoption of mobile social networking. This is largely due to the slower networks and lack of flat-rate data pricing that is only recently being addressed by U.S. mobile carriers, but other important differences must be considered. In the United States, most people have access to a traditional computer on broadband networks, but this is not as common in the rest of the world. In countries Japan, China, and India, for example, access to a personal computer is less common, and this has driven social networking to the mobile phone.

The disparities in the social/technological ecosphere are causing many to postulate that mobile social networking will be quite different in the United Sates than it is in other countries. It is expected that the mobile social networks that succeed in the United States will simply be extensions of traditional online social networks that users are already members of. This is easier on participants because they don't have to set up and maintain profiles on multiple networks, and they can leverage the traditional computer to input information that will require a lot of typing or difficult formatting. Internationally, mobile social networks might be entirely mobile or might have a traditional component that is much less central to the experience.

Table 11.1 lists some of the top social networks and the regions they serve.

Table 11.1 Top Social Networks By Region

United States	Buddy Beacon Buzzed Brightkite dada.net Facebook Fon11 Frengo Groovr itsmy.com	JuiceCaster Loopt MeetMoi Mig33 Mobikade MocoSpace MySpace Nrme	Rummble Strands Twango WhosHere Whrrl Xumii Zintin Zyb
Asia	Cyworld (South Korea) DesiMartini (India) EzMoBo (Taiwan) Frenzo (India) Fropper (India)	iBiBo (India) IndyaRocks (India) MingleBox (India) Mixi (Japan) Mobile Game Town (Japan)	MOBS (India) Sequoia (India) Tencent QQ (China) TX.com.cn (China) Yaari (India)

Europe	aka-aki (Germany) BBC Communities (UK) Bebo (UK) Blyke (UK, Finland)	Faceparty (UK) FriendsReunited (UK) GyPSii I'AM Imity (Denmark)	Mobiluck (France) Moblog (UK) Next2Friends (UK) NinetyTen (UK) Orange World

Social CPM Marketing

Many social networks make money almost exclusively through the sale of advertising on their sites. Although it remains to be seen whether this business model will be enough to keep all the social networks alive, you can be sure that it will always be a key element in the model. The simplest way for a marketer to reach out to potential customers on a mobile social networking site is to purchase ad placement within a cost per million (CPM) model. This is much the same as other mobile CPM advertising, but marketers work directly with the social networking company or their ad network to place and track the ads.

Advertising on traditional social networks was once thought to be the Holy Grail of online marketing because of the ability to target ads based on information that users volunteer in their online profiles. Unfortunately, many marketers were disappointed to realize that people access social networks to interact with their friends and rarely interact with the advertising on the site. When advertising on traditional online social networks, it is widely agreed that your primary goal should be to achieve an increase in brand awareness, because click-through and conversion rates are historically very low. How CPM advertising on mobile social networks will compare isn't yet clear.

Your best bet is to market mobile content or advertise local products and services with discounts and time incentives. Even on mobile social networks, CPM advertising should be considered a brand-awareness campaign more than anything. Many hope that the mobile nature of the experience will improve click-through and conversion rates of the advertisements. Traditional social networks were able to geotarget advertisements based on users' profile information, but in the mobile realm, advertisements can be hyperlocal, based on exactly where the user is at the moment. A majority of mobile social networking happens during downtime, while users are away from home, so this could make them more willing to click on ads. This is especially true if the ads are immediately redeemable, as with mobile coupons or redemption codes that can be used at stores or restaurants in the immediate vicinity. Ads can also be particularly valuable to the mobile audience if they offer some kind of short-term entertainment, to help the viewer pass time.

Branded Profiles on Mobile Social Sites

A more difficult but often more cost-effective way to interact with potential customers on a social network is to create a branded profile and participate as a member of the community. Many social networks allow companies to represent their brand and participate in the social network under a brand name, but if they don't, you can always create a profile based on a company mascot, a figurehead, or the CEO.

This type of marketing must be done very carefully. People who participate in social networking sites generally do not want to be marketed to, so it is important for your profile and your activities within the community to be genuine and community oriented, not self-serving and promotional. If you add value to the community, you will engender trust and affinity for your brand, and build friends and fans more quickly than if you are simply spreading a marketing message. Mobile social networks provide a variety of different types of interaction, but you must participate actively, especially by uploading photos, commenting on other people's profiles, and creating groups. When you are an active part of the community, it will be easier to market your product or service, because friends and fans will be more willing to listen.

Mobile Social Gaming

A different type of mobile social network that is popular in Asian countries is mobile social gaming. Much like Second Life for the cellphone, this type of social networking allows users to create avatars, or visual representations of themselves. Those avatars interact with other avatars within the social network. In some mobile social gaming networks, these avatars behave just as you would actually behave; in other mobile, social gaming networks, there is little relationship to reality—it's more like an online role-playing game.

Each social gaming network is different, but one commonality between all of them is the element of competition (hence, the gaming element). A popular mobile social network in Taiwan, called EzMoBo, encourages users to create avatars that look like themselves. Users participate in the community by interacting with other players, creating groups, and starting conversations. Participation on the site earns players points that can be traded for gifts, which users can send to a friend or keep as accessories for their own avatars. Users who don't have enough points to purchase what they want can spend actual money to present a friend or possible love interest with a gift for their avatar.

Product placement in this type of mobile social network can be powerful, especially for larger brands, because of the public nature of the avatar. Users who choose to

purchase or gift your branded items on the social network are making a public declaration about their affinity for your brand. Don't underestimate this type of loyalty: It allows users to integrate your brand into their avatar, which is a public representation of who they are. It allows for conspicuous consumption, even for users who normally wouldn't be able to afford expensive branded goods in real life. Furthermore, it allows your brand to become integrated into their life as a publicly displayed aspiration, which will help create and increase the lifetime value of these types of customers.

Mobile Email

Mobile emailing came about at the same time WAP did, because the first mobile email clients used WAP to render emails. Mobile email was a luxury many people didn't use on smaller phones, because of the difficulty viewing the email on the small screen and the lack of a complete keyboard to respond with. As PDAs and smart phones came out with full QWERTY keyboards, more people began taking advantage of mobile email. Mobile email marketing hasn't really changed much in all the years it has been around.

Many mobile email clients have difficulty rendering full-HTML emails. You can do a couple things to improve how your email looks on mobile phones. The first mobile emails were simply text renderings of whatever came into your email box. This meant that if you received a text email from someone you knew, it rendered well, but if you received a marketing email from a company, the phone simply rendered the HTML as text, making the mobile version of the email almost totally useless. Many phones still are limited to the simplified text rendering of HTML that was present in the first mobile emails (especially BlackBerries).

The next advance in technology happened when the Palms, Treos, and Windows Mobile Devices began offering a more sophisticated mobile email client that could display pictures and render simple HTML. This made email marketing messages a bit easier to consume on a mobile device, but there were still many display problems.

The most recent evolution of mobile email marketing came with the iPhone (and now with the Palm Pre), truly offering a flexible rendering that looks exactly as it would on a traditional computer when displayed on the iPhone. This meant that recipients finally could get the full impact (almost) of the email marketing message when they were on the mobile phone, with the exception of having to zoom. The email marketing industry has not yet put significant effort into making emails more readable and compelling to mobile viewers on other types of phones. As email clients across all phones become more sophisticated, however, this might become less of a concern.

When sending mobile marketing emails, keep these points in mind:

- Include a link at the top of the email to a Web version of the email, in case people are having trouble viewing the email on their mobile phones. From this landing page, you can use browser detection and redirection to automatically send viewers to a version of the email that is optimized for their device. Also, if you include phone numbers in the text of your email, they will automatically become clickable when they are displayed on a mobile phone. If your campaign relies heavily on people calling in, it is important to include the phone number at the top of the email.
- Including your main navigation can cause problems in mobile rendering, because the buttons could be stacked vertically instead of horizontally, pushing all the promotional information lower, usually "below the fold" that the user can see when first opening the email. In the worst case, the link to each button and the path to each image will be displayed as HTML, pushing all the readable (non-HTML) content far down in the email. It is always a good idea to avoid including your main navigation in your email messages. Even in traditional email campaigns, many experts believe that it can take away from the main messaging of the email and distract the recipient from the main call to action.
- The best thing you can do to improve the rendering of your email campaigns is to test them on a variety of different mobile devices before you send them out. You will probably find that images and text will be stacked to make the email narrow enough to fit the phone. In some cases, images will also be shrunk to fit the phone. The best way to ensure that your images render correctly in mobile emails is to slice the images carefully when you are building the email, making sure that each image will be able to stand on its one, even if the surrounding images do not line up correctly.
- Even if you have not gotten your email campaign to render perfectly on all devices, you should loop email in to help promote your integrated efforts and your mobile offerings. Make sure your email campaign imagery and messaging reinforce the look and feel of the rest of the campaign. Then include links and screen shots of any mobile offerings, such as mobile applications, mobile coupons, or your mobile website. This will catch the viewer's eye and help her understand the value you bring to the mobile interaction. Once your email recipients request mobile downloads or coupons, you will have the opportunity to add them to your list of people who are opted in for mobile communication.

- In Asian countries, many people have email addresses that are specific to their phone, but in the rest of the world, mobile phones usually just pull in copies of messages that were sent to a traditional email address. When an email address is set up on an Exchange Server, users can automatically sync any activity that takes place on the email address, such as deleting or saving emails. If the email account is not set up on an Exchange Server, recipients are forced to delete and save emails twice, to maintain consistency of the account between devices. As phones improve, many email recipients are switching to Web-based email services, to avoid this burden.

Case Studies

The following case studies illustrate how you can create a cohesive marketing strategy that used mobile marketing to tie the on- and offline experience together. These great examples can be benchmarked by companies in a variety of different industries to make more successful marketing campaigns using mobile technology.

David's Bridal

In 2009, in an effort to reach out to teenage girls during prom season, David's Bridal created an integrated mobile marketing campaign that included SMS, MMS, mobile coupons, and mobile search (see Figure 11.8). When users opted in, they were sent text messages with links to the mobile site, where they could watch a slide show of the season's prom dresses. The mobile site also included a store finder and a "send to a friend" feature, which helped spread the campaign virally. Girls could vote for their favorite dresses and receive special discounts and tips, leading up to the big day.

The campaign was promoted on the traditional website and also in David's print advertising campaigns. The campaign helped drive foot traffic and sales in the stores, and gave David's Bridal a targeted list of opted-in recipients for future mobile marketing campaigns.

Figure 11.8 *David's Bridal used mobile coupons and mobile search to reach out to teenage girls preparing for the prom. Image courtesy of David's Bridal.*

Tahato

Japanese food company Tahato started an integrated marketing campaign called "World's Worst War." In the campaign, the company launched two new spicy snacks, Bazooka Deadly Hot and Burning Hell Hot. Both snacks were assigned an avatar representing them as the leader of an army in a mobile social gaming network. Using QR codes on the packaging of the snacks, purchasers could choose to join either of the armies, representing the snack of their choice. This created a massively multiplayer mobile role-playing game. Every night at 4 a.m. the armies would gather at one of 31 virtual locations to battle each other. Players met online to discuss strategies and improved their own rank in the game by recruiting new players. Text messages were sent to all players, giving them updates on the status of individual battles and the war as a whole.

Audi

Audi launched an iPhone application called Truth in 24, launched in combination with the documentary *Truth in 24* about the 24-hour Le Mans race. The application is a racing game that mimics the conditions of the race and gives the player a driver's view of the race track. It encourages players to monitor all elements of the racing experience, including the tire wear and fuel use. It was a great opportunity to create a unique branding message with an important demographic. Audi had determined that 95% of the traffic mobile traffic to its U.S. site came from iPhones and iTouches, so the company wanted to ensure that it was reaching out to the brand-loyal tech-savvy crowd to show that Audi was innovative and in touch with customers' needs.

QR Code Companies

The following is a listing of some QR code companies:

- ShortCode—www.shortcode.com
- Semacode—www.semacode.com
- Scanbuy—www.scanbuy.com
- TagIt—www.tagit.tv
- Kameleon—www.kameleon-media.com
- FuturLink—www.futurlink.com
- 509 Inc.—www.5o9inc.com
- Qwasi—http://qwasi.com

12

Mobile E-Commerce

Mobile e-commerce, sometimes also called m-commerce or mobile commerce, describes any interaction in which a financial exchange or transaction is facilitated or executed with a mobile phone. In many ways, mobile e-commerce is the Holy Grail of mobile marketing because it closes the loop between marketing and its return on investment. Although many hurdles must be crossed before a robust mobile e-commerce system is adopted in the United States, the practice is being rapidly accepted in Asia and Africa and is growing in popularity in Europe. Consumer pressure is forcing carriers, credit card companies, banks, and brands to take notice and start working together to realize the mutual benefit that comes with mobile e-commerce. This chapter reviews important mobile commerce statistics and different business models that are beginning to incorporate mobile commerce.

Understanding how these mobile commerce business models work helps you develop strategies that monetize

these mobile interactions with advertising, or learn more about your existing customer base through these mobile commerce interactions.

Figure 12.1 shows that, in the second quarter of 2009, consumers in the United States were warming to the idea of mobile payments and mobile commerce. In the eMarketer survey, 26% of respondents believed that it was "very safe" to make a purchase via a mobile phone, and 45% believed it was "fairly safe," combining as a total 71% of consumers who might be willing to participate in mobile e-commerce if they were convinced that the transaction would be secure. Only 22% of respondents felt that mobile e-commerce was "unsafe."

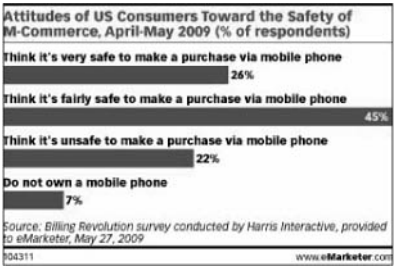

Figure 12.1 *eMarketer survey of what products people were willing to purchase using their mobile phones. Chart courtesy of eMarketer.*

A second study revealed that consumers in the United States who were willing to make a purchase on their phone were more willing to purchase goods and services that fulfilled a temporal or immediate need, such as food, entertainment, and travel needs (see Figure 12.2). In terms of food, many consumers were willing to purchase pizza and other fast food, but only 25% were willing to purchase coffee. Almost half of the respondents said they were willing to purchase hotel rooms or travel tickets. 58% said they were willing to purchase tickets for some type of entertainment, such as movies or concerts. Surprisingly, one of the smaller categories was digital content, with only 41% reporting that they were willing to purchase music, 34% saying they were willing to purchase games, and 24% reporting a willingness to purchase mobile video content over their phones.

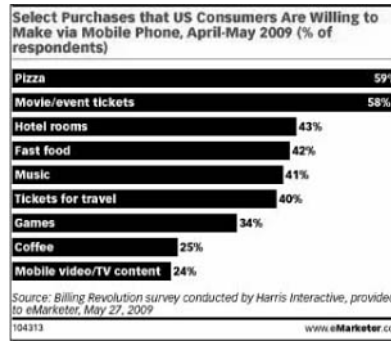

Figure 12.2 *eMarketer study that reveals what kinds of products or services people would be willing to purchase using their mobile phones. Chart courtesy of eMarketer.*

Finally, another study from eMarketer reviewed the purchases people made over their mobile phones at PriceGrabber.com, performed at the same time period (see Figure 12.3). This study showed slightly different results. This study revealed that, for those who made mobile purchases, 58% purchased digital content to be consumed directly on their mobile phone, 51% purchased consumer electronics, 37% purchased computer-related goods, 36% purchased books, 31% purchased clothing, and 20% purchased jewelry.

Although these results might not be entirely representative, they seem to indicate that when it comes to physical goods, consumers are willing to purchase a variety of different types of goods at a wide range of price points.

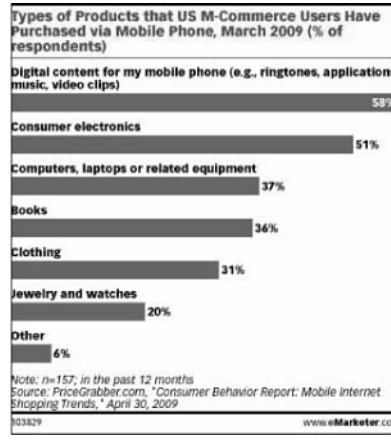

Figure 12.3 *eMarketer study that shows what types of products people purchased from PriceGrabber.com using their mobile phones. Chart courtesy of eMarketer.*

As it stands today in the United States, most mobile e-commerce is still completed via micropayments that are sent directly to the carrier in exchange for digital content such as ringtones, applications, music, and videos. Some key players, such as Google Checkout, Amazon Payment, and eBay, have begun to integrate mobile payment, but these services have not yet been widely adopted.

Mobile commerce covers a variety of activities that can be categorized as mobile payment or mobile banking. This chapter outlines a variety of different types of mobile e-commerce, as well as important aspects of mobile commerce implementation and security. This topic is evolving at break-neck speed, so when you begin to integrate e-commerce in your business, it is vital that you vet all your vendors and merchants, to ensure that your campaign complies with best practices and industry security standards.

Mobile Payment

Mobile payment is simply the capability to pay for a product or service using your mobile phone. Mobile payments can take place over the Web or can be completed in the offline world through contactless payment options such as Near Field Communication (NFC) and Radio Frequency Identification (RFID).

All mobile payments fall into one of two camps, micropayments or macropayments, depending on the size of the transaction and how the payment is processed. As in nonmobile commerce, processing credit card payments (especially macropayments) usually requires that the merchant pay the credit card company a fee for each transaction, usually between 20¢ and 50¢. Credit card processing thus cuts into the margins of many mobile commerce solutions and must be figured into your business plan. You should also balance the potential revenue from mobile commerce with the credit card processing fees, as well as other hard costs and overhead that will be required to complete the transactions.

Micropayments

Micropayments are small mobile commerce transactions that can be completed on a phone and, in many cases, billed directly to a user's mobile phone bill or to a credit card. These payments usually range between 1¢ and $5, and are useful for low-consideration purchases and the purchase of digital content. The most common types of micropayments are direct-to-carrier billing, subscriptions, and user accounts that are tied to credit cards.

Direct to Carrier Billing

One common instance of micropayments in the United States and around the world occurs when mobile carriers offer directory service (411) or premium SMS charges and downloadable mobile content such as ringtones or wallpapers. The carrier provides these goods and services, so they can be billed directly to your mobile phone bill. According to Wikipedia, 70% of all digital content in Asia, including traditional Web content, is purchased in this way. This type of mobile payment is ideal for the carriers. It is a simple and viable add-on to any mobile service plan and can be quite profitable. The carriers can bill customers directly instead of processing credit card payments and incurring merchant fees. Because credit card information does not need to be obtained, the processing of a purchase is quick and secure, and usually is completed within 10 seconds on a fast connection.

Subscriptions

Carriers and other mobile content providers offer subscriptions to SMS updates that are charged to the subscriber's bill in the same model. These subscriptions can be alerts about news, sports, weather, stocks, horoscopes, and the like, and the subscriber is generally billed for each text individually. These types of subscriptions are ongoing commitments, as with a magazine or a cable TV subscription, and subscribers must cancel or deactivate them if they want to stop incurring charges.

User Accounts Tied to Credit Cards

Other types of micropayments can be completed via accounts where credit card information is stored and validated with a PIN or a password. In the mobile world, the most common company that uses this type of service is iTunes; people download music or videos directly to their iPhones. This format of payment is also quite common in the gaming and adult mobile industries, where users can pay for downloads one at a time.

Macropayments

Macropayments are used for purchases that cannot be billed as a micropayment, usually for goods or services over $5. Prepayment, prompted mobile payment, full mobile Web transactions, and full brick-and-mortar transactions with proximity-based mobile payment are the four most common types of macropayments, and they are covered in more detail next.

Prepayment

A variety of different companies have begun to allow their customers to create prepaid accounts that are debited each time charges are incurred and that stop working when the money in the account has been spent. This mobile payment option allows account holders to track their spending and prevent charges for excess use of the service, by avoiding overage charges. Prepayment accounts are most commonly used for mobile phone bills themselves, but can also be used with public transportation and fast food. With this method of payment, users create an account, usually online, and submit an initial payment to start the service. Periodically, users are sent text messages to inform them of their account balance or remind them to add money to their account, otherwise known as "topping-up." Because accounts have already been created, the customer has the option of repeating the payment amount and billing information of the last transaction, or adding different amounts or billing information to the account.

Note

Prepaid mobile phones are relatively new in the United States but have been well accepted in the rest of the world for some time. In the United States, some of the major carriers have begun offering prepaid mobile phone service, but for a long time, the prepaid market was dominated by Cricket Wireless and TrackPhone. These services were ideal for people who were not old enough or did not have the necessary credit score to get service plans from the bigger carriers.

Prepaid subway and bus passes are also becoming more common. In this payment model, accounts are usually created online but are electronically tied to physical NFC or RFID chips stored in the hardware of the phone. The technology behind NFC and RFID is covered in more depth in Chapter 6, "Mobile Promotions and Location-Based Marketing." When customers pass through a subway gate or boards a bus, they simply swipe their phone over a sensor, and the fare is deducted from the account. Again, account balances and reminders are periodically sent to the customer via SMS.

Restaurants are also beginning to test prepaid accounts, although so far this has mostly focused on the larger fast food chains. This mobile payment model works in exactly the same way as the public transportation scenario, but it can be a bit more complicated to implement. In fast food restaurants, the exchange is simple because food is purchased directly at the register, where the phone can be swiped over an NFC or RFID sensor and immediately deducted from the prepaid account, just as it would be with a debit card.

In more traditional restaurants, where the waitstaff either takes a credit card to swipe at a processing terminal or processes the card at the table wirelessly, there is the expectation to tip. In this instance, the signal from the NFC or RFID chip owned by the restaurant must prompt a screen that allows the customer to enter a tip. This is a bit more of a hassle, but you can preprogram the system to precalculate common tip percentages for the patron, making the process easier and quicker to complete. See Figure 12.5 to get a better idea of how this type of transaction takes place.

Prompted Mobile Payment

Prompted payment is much like prepayment, except that the credit card on file is not charged until after the service is rendered. In this payment model, the service provider usually sends the customer an SMS with the total bill and asking permission to charge the credit card on file. Again, some carriers use this to remind their customers to pay their bill on time. In this scenario, the carrier sends a text message to the subscriber at the end of a billing cycle, notifying the customer of the total amount due and allowing him or her to respond with a preset PIN to pay the bill with the credit card information stored in the account. Prompted mobile payment is a great way to streamline bill payment or even charitable contributions because it can provide a cost savings over direct mail and can be used by a variety of different service providers, including home utilities, subscription TV services, and even childcare services.

Full Web Transactions

As on the traditional Web, entire transactions can be completed on the mobile Web without the need for an account or any kind of prepayment. Customers simply enter their credit card information, just as they would on the traditional Web. This type of mobile commerce is most commonly used by websites that offer some kind of mobile shopping experience. This method of mobile payment has been historically difficult, but it is improving with the market penetration of true Web-browsing phones and QWERTY keyboards. On WAP browsers in less-capable phones, the risk exists that the form fields for the payment information will be misaligned or that the JavaScript necessary to submit the form will not execute correctly. In the worst case, customers could hit the Submit button and reach the "thank you" page, but the actual order would never have made it into the system. The most common complaint with this type of mobile commerce is that if they don't have accounts set up, users must enter all their shipping, billing, and credit card information using the small keypad of their phone. This can be quite slow and cumbersome for the customers and can be a serious disincentive for a mobile purchase.

A couple tactics can make this mobile payment method more effective. All the best practices for mobile forms, discussed in Chapter 9, "Mobile Website Development," should be followed. The most important thing you can do when setting up this type of mobile commerce is to ensure that any problems cause by the mobile rendering do not prevent the completion of the sale. This includes providing users with a clickable phone number so that they can click to call if the phone is not working, allowing them to save their shopping cart or email themselves a link so that they can pay later when they get to their computer.

To limit the amount of scrolling that a user has to do to finish the form, sometimes it is a good idea to include the form input instructions in gray, inside the form fields, instead of above or beside the field. When a user clicks in the field, the instructions should disappear so that the field is ready to accept the information. This simply minimizes the vertical space that the text takes up, making the form appear shorter to the viewer. It is also a good idea to use check boxes and radio buttons whenever possible, to eliminate the amount of typing the user has to do on the phone.

When the user is submitting the form, you should minimize the information to include, limit the number of steps to finalize the purchase, and never require that a user account be set up to make a purchase. If user accounts are available on the traditional website, they should also be available on the mobile website so that users can log in to access their saved credit card and shipping information. When you are collecting their billing information, include a check box if the shipping address is the same as the billing address so that customers don't have to type their address twice. Clearly mark which fields are required and which fields are optional, and be as comprehensive as possible when creating the requirements for a successful submission. In the same process, allow users to create an account and save information to it if they would like to.

If the form submission returns an error, make sure the error page reloads the form with all the information the user has already input, and then scrolls exactly to the location of the field that must be updated. Place the error message directly above or below the field in red, with specific instructions about the requirements of the form. If a credit card is rejected or cannot be processed, offer the user the ability to re-enter it, but also provide an order ID and a clickable phone number so that the customer can click the phone number to be connected directly to a representative to complete the purchase over the phone. Some phone systems even enable you to transfer the order ID in the dialing sequence so that it is already in the system when a representative is reached. This is ideal, because once the phone is in calling mode, it will be hard for the user to switch back to the mobile browser to get the order ID off the browser screen.

If your customers are able to create accounts, you should test using HTML/JavaScript cookies to identify specific users when they enter your site. Not all mobile browsers accept cookies, but many do, and they can make it less daunting for your customers to complete a purchase on their mobile phone. The cookies should store their log-on information and shopping cart but, for security, should require customers to re-enter their password to access any billing or shipping information or to make a purchase.

Full Brick-and-Mortar Transactions with Proximity-Based Mobile Payment

Some credit card companies are beginning to work with mobile phone manufacturers, to make phones capable of Near Field Communication (NFC) and Radio Frequency Identification (RFID) proximity payment that bills directly to the user's credit card. With this payment model, the mobile phone can be used to pay for any goods and services on the spot, in a brick-and-mortar store, simply by swiping it over a sensor. A chip embedded in the mobile phone simply acts as a relay between the merchant requesting payment and the purchaser's credit card company. Systems like this are not yet common in the United States or Europe, but they are growing in acceptance, especially in Japan and Korea. (As mentioned, NFC and RFID technologies are discussed in more depth in Chapter 6.)

Both the customers and the retailers can benefit from the integration of LBS-style mobile payment. For the customer, it offers the convenience of shopping without having to carry credit cards, cash, or checks. For the retailer, it can streamline the checkout process, creating efficiencies that can even minimize the need for staff at payment registers.

In addition to a traditional brick-and-mortar purchase, this kind of mobile e-commerce can be leveraged by vending machines, street vendors, and even traveling merchants or promoters. In China and Japan, this kind of proximity-based mobile payment is even being used for transportation ticketing and paid-parking situations. In all cases, campaigns that integrate this type of mobile payment will see more success and uptake if they are integrated with other customer touch points that can add value to the transaction. Consider a couple examples where mobile proximity payment can be used.

Retail Locations

When retail locations integrate a proximity-based mobile payment solution with an existing coupon or promotion, they can encourage customers to test the new payment method to participate in the promotion or get the discount. A good example is a store that offers 20% off the final purchase if customers complete the transaction with their RFID- or NFC-enabled phone.

Vending Machines

Using proximity-based mobile payment in vending machines can help both the customer and the vending company. In this instance, mobile payment allows users to make a purchase even when they don't have cash on hand, and it enables vendors to remotely track the levels of stock in each machine. Switching to a mobile payment option also prevents service personnel from having to visit the machine before it is out of stock, simply to remove cash.

Street Vendors, Traveling Merchants, and Promoters

Wireless credit card payment and processing is quite popular in Europe but has not yet become mainstream in the United States. With this technology, service providers can carry a mobile device that can process credit card payments over a cellphone or WiFi signal. For instance, a train attendant could accept payments for train tickets, or waiters could accept payments for meals while walking around with this device. As it grows in popularity, mobile phone payment likely will be integrated with the wireless processing systems.

Figure 12.4 shows a wireless credit card terminal. This device enables a merchant to process credit card information over a cellular network so that it can move around in the course of work and not be tethered by a pay station or an Internet wire. This kind of payment processing can be especially effective for street vendors, traveling merchants, and promoters, but can also be quite useful for plumbers, maids, mechanics, valets, roadside rescue, locksmiths, and other business that require constant mobility.

Figure 12.4 *Wireless credit card terminals enable merchants to process credit card information over a cellular network.*

In the United States, credit cards use a magnetic strip to communicate with the merchant credit machines, but in Europe, they have transitioned to a system called "chip and PIN." With a chip and PIN payment, the credit card is usually inserted vertically into the payment device and left there for processing, rather than swiping the card as in the United States. The "chip" is an RFID chip that is used to automatically verify information with the card issuer. Figure 12.5 shows several screens from a chip and PIN device.

With any chip and PIN transaction, you are expected to enter a PIN and provide a signature as part of the verification process. Because of this added layer of protection, wireless credit card processing is much more common when a chip and PIN system is present. Instead of taking your credit card away to process when you are paying at a restaurant, waitstaff brings a small wireless processing terminal so that the credit card can be processed directly at the table.

Many companies are working to integrate this type of wireless mobile payment with mobile phones. In this model, a wireless mobile payment terminal could interact directly with a wireless phone through NFC or RFID in much the same way a credit card payment would be processed.

Credit card companies and banks actually tout RFID as a new layer of protection rather than a weakness or opportunity for abuse. Sophisticated RFID payment systems, such as those in chip and PIN credit cards, validate cards by randomly generating unique transaction numbers for each chip, and these change with each transaction. When a transaction is processed, the transaction number on the chip must match the transaction number in the card issuer's database. With this kind of assurance in place, even if thieves had access to a credit card number and an expiration date, they could not complete a transaction.

Figure 12.5 *Using wireless credit card terminals enables merchants to move around and not be tethered to one location.*

Travel and Entertainment Ticketing

In 2008, Juniper Research predicted that, by 2013, more than 400 million people in the world will be using mobile ticketing. The major benefit is that when tickets are sold electronically, staff does not need to work at the ticket counter, because tickets can also be delivered directly to

the mobile phone. Tickets can be purchased ahead of time, over a mobile Web or SMS payment system, or can be purchased as people enter the venue, when they swipe their phone over a sensor.

Mobile ticketing has seen the highest penetration in East Asia, where Japanese rail travelers and Indian cinema patrons are already purchasing tickets via their mobile phone. Presumably, adoption of this type of mobile commerce in the United States and Europe will follow the same patterns, so travel and transportation will be the first industries to truly embrace mobile ticketing, followed by entertainment and sports.

When mobile tickets are issued, they should include a barcode or redemption code that the attendant can enter directly off the phone at the door or the ticket booth. To make the most of this type of mobile commerce system and improve the user experience, it is incredibly important to give clear directions both on the mobile phone and in the physical area where patrons line up to redeem their tickets. This will help reinforce the efficiency of the process that you need to make mobile ticketing a true success.

The best way to encourage customers to take advantage of a new mobile ticketing program is to loop it in with other incentives or use it to create some efficiency in the customer experience; for example, you could create separate lines for mobile ticket holders, allow people with mobile tickets early entrance, or provide mobile-only coupons or discounts that can be redeemed within the venue.

Parking

Mobile payment can also be used to improve paid-parking opportunities, with or without the presence of a parking attendant. Mobile payment can be integrated in a number of ways, depending on the capability of the phone. Customers can text their parking spot number to a system that sends them a link for online payment. Alternately, customers can be prompted to visit a mobile website where they can enter their parking spot number and credit card information to pay.

Adding functionality to this type of mobile e-commerce is simple and useful for customers. You can send customers information and maps to remind them exactly where their car is parked, in case they can't find it later, or, if the parking spot is metered, the user can add time to the meter over the phone without even having to go back to the car.

Mobile Banking

Mobile banking has come to mean different things to different people, but it is essentially any activity that allows currency to change hands via a mobile phone.

Two types of currencies are usually described as being banked in discussion of mobile commerce: traditional government-issued currency (such as the dollars and pounds that many of us are used to keeping in our bank account), and mobile talk-time minutes, which can be traded for goods and services and then sold back to the carrier for traditional state-issued currency.

Using a mobile phone to complete a banking transaction has already become common in many places around the world, and the practice is growing quite rapidly, especially in the developing world. The functionality for mobile banking is improving because, as Ben Lorca from O'Reilly Radar explains (in his article "Mobile Banks in the Developing World Prove Simpler Is Better"), "Unencumbered by legacy software systems, business rules, and practices, mobile banks are innovating at a much faster pace than traditional financial services companies."

As mobile phones and service become more available in developing countries, mobile banking has been especially important to the development of the regions. It is being used to reach those who are described as the "unbanked": people who have never had a bank account and have always dealt exclusively in cash. Mobile banking also allows banks to reach a wide audience without as much reliance on expensive brick-and-mortar branches to serve their customers. In these areas, mobile phones are much more prevalent than computers, and many people live a long distance from the nearest bank.

Mobile banking began in developing countries as an informal trade of mobile minutes that were used and resold to others as a form of currency. In cultures where cash was the predominant or exclusive form of exchange, minutes were purchased with cash and then could be sent to other registered users via text message, and later sold back for cash all at corner shops. This method of transaction is commonly used by traveling laborers to send money back to their families in their village.

Mobile banking can be beneficial for both banks and their customers. It can decrease the overhead of the banks by either minimizing the reliance of human tellers or minimizing the need for brick-and-mortar branches in the first place. Mobile banking enables customers to manage their accounts, complete person-to-person money transfers, and set up bill payment without having to use a computer or go into a bank branch.

Institutions that offer mobile banking can provide their customers access to their accounts in a variety of ways. The method of account management that will be most successful generally depends on the type of handsets that are prevalent in the region the bank serves. If the customer base is using less capable phones with limited browsers, it is best to provide banking either through a WAP portal page or through SMS. If mobile Web access is limited in the region you are targeting, you might want to focus your efforts on SMS banking first.

In SMS banking, bank patrons register their phone number with their bank and are given a short code that they can use to direct bank requests. Requests can be submitted to receive account balances or transfer money between accounts. Bank patrons are given specific commands that can be entered in a text message, with money amounts associated with them. The bank system receives the request and executes the request, usually requiring a PIN confirmation, and then sends a transaction number back to the phone when the request has been completed.

In areas where mobile Internet access is more common but smart phones have low penetration, WAP sites are a good way to reach a mobile audience. WAP banking websites essentially offer a streamlined version of a traditional banking website. This is slightly more convenient for customers because they don't have to enter SMS commands, and the bank avoids the cost of maintaining the short code systems necessary for SMS banking. Whenever possible, the WAP website should provide all the functionality that the traditional website does, including the capability to transfer money between accounts and pay bills online.

If your target demographic is more likely to have smart phones and easy access to the mobile Web, it might work well to update your existing website to work on mobile phones or to create a mobile banking application that can be downloaded and installed on the customer's phone. In most cases, you can create a scenario in which customers need only authorize recurring payments, transfers, or other account modifications with a PIN, rather than inputting them each time.

Ideally, your solution will incorporate functionality that addresses each level of phone capability. Regardless of which type of mobile banking model works best for your company and your customers, it is important to fully integrate the offering with the rest of your existing services. Make it easy to access, and keep it top-of-mind. Promote it in your existing marketing channels, such as in TV and radio commercials, in brochures, in emails, and on the website. Let your patrons create and customize personal notifications about their account, such as when a balance gets to a certain level or when a bill is due; this helps create value and keeps the bank top-of-mind.

Usability is very important when it comes to online banking. In any mobile banking scenario, it is crucial to provide clear instructions on how to best manage the account from a mobile phone. If you are working with smart phone users, you can include a vCard with all the bank information so the user always has the phone number, website information, and even SMS commands handy if they are needed. If you are working with a demographic with a high percent of previously unbanked members, it is especially important to make all the interactions simple and to provide instructions whenever you can.

One of the best aspects of mobile banking is the capability to use your banking communication to learn more about your customers; this will enable you send them more targeted marketing over the phone. For example, if customers are constantly overdrawing their accounts, you can include ads for overdraft protection or bank credit cards whenever you send an SMS to let them know that they have overdrafted the account. Alternately, if customers appear to move large sums of money between accounts frequently, you can send them information about your financial planning services each time you send them a transfer confirmation. With this type of mobile marketing, you will reach your customers when they already have banking on their mind. For credit card promotions, financial advising, or insurance, you can even prompt them with a click-to-call phone number so that they can talk to a representative about the offer over the phone.

Security and Other Concerns

Obviously, security and risk management are the biggest concern for any company that wants to accept mobile payment or engage in mobile banking. Before you engage in any kind of mobile commerce, you should have a clear understanding of the risks it presents.

If any part of your mobile marketing campaign involves the input of financial information, it is vital for you to protect your users' privacy and ensure that the transmission of that sensitive data is as secure as possible. Working with a trusted mobile payment provider is crucial. These providers generally have the most knowledge about different types of mobile payment processing, as well as the laws and restrictions regarding mobile payment in different countries and with different carriers. Needless to say, the transactions should be encrypted and as secure as possible. The major risks associated with mobile e-commerce are phone theft, operator error, and hacking.

Mobile Commerce and Phone Theft Risks

In some ways, mobile payment can actually be more secure than traditional online transactions. This is because the biggest threat to online transactions is generally malware or viruses that collect users' sensitive information and transmit it to an external database over the Web, to later be used or sold by hackers. Mobile SPAM and spyware is covered in more depth in Chapter 13, "Mobile Marketing Privacy, Spam, and Viruses," but the general findings are that mobile phones are still relatively safe from that type of abuse. The lower threat of phone hacking actually gives mobile e-commerce a safety advantage over traditional e-commerce.

If you are selling products on a mobile site, you will generally be working with a mobile payment provider rather than creating the mobile payment system on your own. The mobile payment company that you work with should have a list of established clients that you can contact who report positive experiences with their services. They should also have lawyers on staff or on retainer who are familiar with the telecom and commerce laws of the region that you will be serving and who are willing to review your particular legal concerns. As an added protection, you might also want to hire your own lawyer to review the legal situation of each m-commerce platform or initiative before it launches.

The primary concern with mobile banking is that the banking information is generally stored on the handset, so if the handset is lost or stolen, all the accounts and information stored on the phone are susceptible to theft. This concern extends beyond financial information to other sensitive information stored on a phone, such as emails, documents, pictures, and videos, so many companies are coming up with "remote kill" features that back up all the information on the phone in the cloud and then block all access or clear all content from the phone memory remotely if it is reported lost or stolen. Savvy mobile payment companies will begin integrating their services with existing remote kill software companies, or will begin including it as a feature in their own mobile commerce platform.

Any company or institution that enables customers to create an account on the website must follow industry best practices before accepting payment or sending money. Just as on the traditional Internet, the best practice for mobile is to never display a full account number or passwords on the Web, but instead to just display the final four to six, with the rest of the numbers displayed as stars (*****-*****-1234) or *x*'s (xxxxx-xxxxx-1234). This ensures that anyone who finds the phone does not have access to the account numbers, in case remote-kill features are not in place. It is also best to require that a PIN be entered for any account modification. If these safeguards are in place, a thief will have limited ability to make any real changes or do any damage without the PIN.

Mobile E-Commerce and Operator Error Risks

Other concerns about mobile commerce relate to the sensitivity or range of NFC and RFID readers. Because these types of payments are based on proximity, and phones need only be passed over a sensor, there is a risk of accidental payment based on proximity. A good example of the problem can be seen with a U.S.-based chain of gas stations: Before mobile payment became a viable option, the gas station tested payment key fobs that used contactless payment technology similar to RFID. After pumping gas, customers with key fobs could simply run them in front of a sensor on the gas pump to pay. It was a nice idea, but unfortunately, when cus-

tomers walked past other gas pumps in the station, the sensors were so strong that they were accidentally charging customers with key fobs for other people's gas.

Newer technology has addressed many of these concerns, but even so, it is much easier to accidentally pass your phone over a sensor than it is to "accidentally" swipe your credit card through a credit card machine. The standard for contactless payment is about 4 inches or 10 centimeters. Now, ten years after the gas station's experiment, MasterCard, Visa, and American Express are all testing similar key fobs as contactless payment devices and are seeing great success. When these technologies are well tested and accepted, it will be only a small task to get the technology included in the hardware of a mobile phone handset.

Another mobile commerce concern is that when online payment transactions happen, the network could suddenly cut out and drop the connection while in the midst of transmitting a payment. In that scenario, users might think they paid, but sellers would never get the payment because the connection was lost. The website and payment system should be configured to send error messages if transmissions were not received correctly. The system should also be set up to send confirmation messages when transmissions were received and processed, to inform and assure the purchaser of the completed order.

Mobile E-Commerce and Hacking Risks

Outside of the more physical concerns about safety, debate in the mobile payment community swirls about different technologies and configurations. Although there have been no major reports of RFID hacking, the systems are not yet as secure as most of us would desire. There is unease regarding RFID card readers that can be created to access card information for malicious purposes rather than to simply execute a payment. The potential also exists for RFID readers in retail outlets to be "skimmed" by technology that can extract unencrypted credit card numbers and expiration dates as the reading is transmitting the data.

Because the technology is new and the potential unanticipated exposure is great, many groups that would like to establish standards and guidelines for companies that want to embrace mobile payment. The Global System for Mobile Communications (GSM Association, but originally, the Groupe Spécial Mobile) is pushing for a worldwide standard for mobile payment that it calls the Universal Integrated Circuit Card (UICC). This would be a standardized chip that would store all sensitive information in an NFC-enabled device. Other potential methods for securing mobile information include using Secure Digital (SD) cards to store the information, and storing the information on software in the phone memory instead of on a removable chip.

Because mobile payment is still evolving, there are bound to be pros and cons to each decision or technology along the way. Financial institutions and retailers would be wise to embrace security as much as possible and to model existing methods of traditional online payment, to develop and enhance the amount of protection they can provide for their mobile customers. Despite the concerns, mobile payment promises to be an important evolution of modern business and an important aspect of any mobile marketing campaign.

13

Mobile Marketing Privacy, Spam, and Viruses

The personal nature of mobile marketing is generally a great benefit, but it can also cause major problems for marketers who are not respectful of their customers' privacy. As with traditional computers, mobile phones are subject to attacks on privacy with spam, malware, and even viruses. For marketers to be truly successful in the mobile space, they must be able to leverage the personal nature of the channel without jeopardizing or compromising the customer relationship or the private information that it provides. The advice in this chapter will be particularly useful if you are building an interactive mobile website creating a mobile SMS campaign or using mobile technology to encourage the download of mobile content.

In the world of mobile marketing, trust is at a premium, so mobile marketers are generally forced to abide by laws and standards for both email- and computer-based marketing, as well as phone-based telemarketing restrictions.

That being said, the laws are frequently unclear or disparate, so mobile marketers in the United States are also forced to abide by federal as well as state laws that might impact their campaigns.

For the most part, laws that control marketing and messaging on the traditional Internet also apply to the mobile phone. SMS marketing and other mobile-specific communications that do not have a traditional computer counterpart are sometimes regulated by the local government or by the carriers. When spam is sent across multiple carriers or to recipients in multiple countries, it gets harder to enforce, so it is generally monitored and guided by agencies and associations. These agencies and associations create best practice documentation and codes of conduct to help marketers understand the mobile rules of engagement. However, many of these standards are not enforceable by any central body.

On the traditional Internet, pop-up advertising, spam, spyware, malware, and viruses began to hit the radar of the normal Internet user in the late 1990s and early 2000s. Just as Internet download speed increased and the medium began to take off as a marketing channel, some marketers began unscrupulous campaigns. Similarly, as we continue to see growth in the adoption of mobile communication, mobile commerce, and mobile marketing, we will also see some marketers trying to take it too far.

Some people will always try to push the envelope or blatantly disregard the best interests of their customers, but in some cases, it can be hard to tell when things have gone too far. Many countries have laws to protect the privacy of their citizens and prevent unsolicited marketing messages, but few countries have specifically codified

rules about mobile marketing. Until more specific laws are put into place, we must look to the best practices that are created by international associations such as the Mobile Marketing Association (MMA) and the Direct Marketing Association (DMA).

Notions of privacy are culturally relative, and different regions have different laws that could affect your mobile marketing campaign. This chapter is meant to provide loose definitions and recommendations about the privacy implications of mobile marketing, but it is not meant to be exhaustive. Consult local experts whenever you have legal concerns regarding the deployment of a mobile marketing campaign. This is especially true if your campaign has elements that add to the legal risk, such as a target market under the age of 18 or the opportunity to win a prize. This chapter includes discussions and examples of mobile spam, malware, and viruses. It also discusses what carriers and marketers can do to protect their customers' privacy and their own best interest. Finally, it gives a brief overview of the major laws and mores regarding privacy in different regions around the world.

What Is Mobile Spamming?

The word *spam* is basically just geek-speak for untargeted digital marketing communication. The term was originally used to describe untargeted email marketing, but the definition has expanded to include all types of marketing communication that recipients have not consciously opted into. *Spam* is also used to describe marketing communication that is deceptive or obtrusive. Although email spam can be accessed on mobile phones, mobile spam generally describes unsolicited text, picture messages, or location-based marketing.

In the mobile world, spam can often be a bit more sinister than traditional email spam. The mobile medium is new enough that many users are eager to find new mobile applications or content and are unaware of the risks. They might be tricked by unsolicited SMS messages encouraging them to download a free ringtone; if they

don't read the agreement, they might not know that by downloading the first free ringtone, they have opted into a subscription and will be sent weekly ringtones that are not free, but are automatically charged to their phone bill.

In the United States, unsolicited text messages are less common but more troublesome because carriers generally charge for both the sending and receiving of text messages. In other countries, unsolicited text messages are much more common and still a nuisance, but at least they do not directly impact the recipient's bill.

Mobile spamming can get much more insidious when it incorporates attempts to solicit private information under false pretenses, otherwise known as phishing. In March 2008, Brian Krebs of *The Washington Post* reported about a mobile phishing scheme that used a voice mail system (sometimes called vishing) to collect private banking information from its targets:

> The scams in this case took the form of a type of phishing known as "vishing," wherein cell-phone users receive a text message warning that their bank account has been closed due to suspicious activity, and that they need to call a provided phone number to reactivate the account. Victims who called the number reached an automated voice mail box that prompted callers to key in their credit card number, expiration date and PIN to verify their information (the voice mail systems involved in these sorts of scams usually are run off free or low-cost Internet-based phone networks that are difficult to trace and shut down).

The scam went on for about a month, with the perpetrators sending out millions of text messages, receiving 4,400 calls and full account information for 125 victims.

Note

Phishing is a form of attack in which a thief uses email and the Web to pose as a legitimate company, such as your bank, and attempts to solicit your account information. The idea is that victims believe they are interacting with an actual company, when they're actually handing over private information to a thief. Vishing, on the other hand, is similar to phishing, in that the thief poses as a legitimate entity. However, instead of using the traditional Internet as a medium, vishing uses landlines as well as VoIP (Voice Over IP, or Internet phone service) to solicit private information, such as Social Security numbers, account numbers, and so on.

What the Carriers Can Do to Stop Spam

In many cases, mobile privacy and security is the onus of the carriers and the service providers rather than the marketers. We rely on them to secure and maintain their own networks, as well as work with other networks to prevent the spread of unsolicited marketing messages and malware. Mobile operators already block hundreds of millions of unsolicited text messages each month and are expected to have antispam included in all third-party contracts. They are also expected to provide customers with information and advice regarding the prevention of mobile spam, including mechanisms for reporting spammers.

The Groupe Speciale Mobile (GSMA), a European body that governs telecommunication communication, has created a Mobile Spam Code of Practice that asks carriers to voluntarily commit to the following:

- Providing a subscriber consent mechanism for the carrier's own marketing efforts
- Working cooperatively with other carriers, including those not yet committed to the code
- Including antispam conditions in all contracts with third-party suppliers
- Providing subscribers with the information and resources to help them minimize mobile spam
- Reviewing customer contracts, terms and conditions, and acceptable use policies to ensure up-to-date and relevant antispam conditions
- Encouraging governments and regulators to support the issue when necessary

Internationally, mobile spam is quite a large problem. In 2008:

- Forty percent of the SMS messages received in India were spam.
- Fifty percent of the SMS messages received in China were spam.
- Seventy percent of the SMS messages received in Japan were spam.

In the United States, many carriers have their own set of privacy requirements for mobile campaigns that are run on their network. Following are a few examples:

- **AT&T**—In SMS messaging, the recipient must opt into receiving text messages from the sender before they are ever sent; the sender must be identified in every message that is received.

- **T-Mobile**—T-Mobile requires that users opt in before receiving mobile messages and requires that advertisers submit a description of the message flow that the marketing campaign will take.
- **Verizon**—Verizon has a certification board to approve all Premium SMS campaigns or any changes in the prices of the service. Opt-ins are not required on the Verizon network, but this is expected to change soon.

What Mobile Marketers Can Do to Stop Spam

As a mobile marketer, the best thing you can do to stop mobile spam is to not send it yourself. Mobile marketing can give marketers a deep insight into their customers' lives. Although it is always best to track and measure as much as possible, you have to create a balance between the value you get from the information you collect and the risk that your customers might consider it an invasion of privacy.

Many of your potential mobile customers might be unaware of the level of tracking and targeting that is capable on a phone, but if they were aware of it, they might find it unsettling. Always be as transparent as possible with the people that you are marketing to, but at the same time, it is important to couch your transparency correctly, so as not to create undue concern.

Concern for privacy varies greatly among different age groups, cultures, and customer profiles. For instance, Figure 13.1 demonstrates attitudes toward mobile spam in Japan. The simplest way to address the concerns of all the various groups is to always consider mobile marketing a permission-based channel. Strive to acquire permission each time a new level of bond is created between your brand and its customers. This conservative mentality should keep you in the good graces of your customers and will do a lot to keep you on the right side of the law.

Also keep all marketing messages as relevant as possible to the recipient. Sending communication that is untargeted or irrelevant to the recipient will only increase the rate of people opting out of your messages. Messages that lack targeting can also drive up the cost of the campaign and decrease the potential ROI, not to mention expose you to more legal risks.

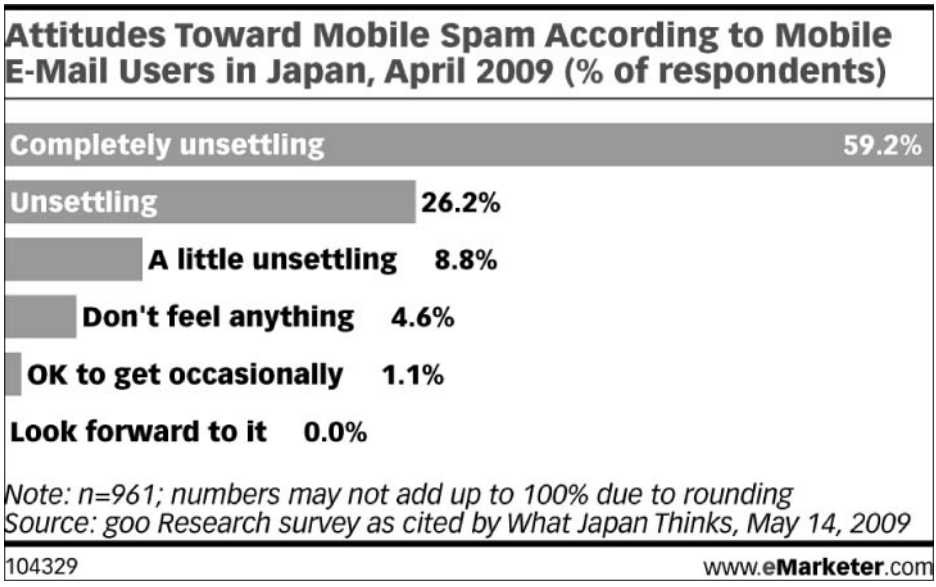

Figure 13.1 *Privacy concerns as they relate to mobile marketing vary among age groups, countries, and customer profiles. Japan's attitude toward spam is shown here. Chart courtesy of eMarketer.*

Joel Dichter of DMNews does a good job of summing up the legal requirements for SMS marketing in his article "Navigating the Legal Aspects of Mobile Marketing":

> In general, when promoting programs via mobile phones, content providers should ensure all material clearly indicates whether the service is a subscription. The program's terms and conditions, the pricing information, additional fees, the subscription term and billing interval also must be disclosed. Consumers should be informed whether the charge will appear on customers' mobile phone bills or will be deducted from their prepaid balances.
>
> For programs charging the subscriber a normal rate for text messaging, only a single opt-in is required. This single opt-in only applies to the specific program to which a customer subscribed and should not be construed as approval to market other products or services to the customer.
>
> For premium rate programs, a double opt-in is required. Where the premium service is a subscription service, the double opt-in must include identification of the service as a subscription and the billing interval. In addition, subscription periods should be no longer than one month, and prior to renewal of the service (or at least once a month) a renewal message must be sent to the subscriber.

Whenever someone opts into text message marketing, it is important to let them know how they can opt out and to send them a link to the terms and conditions of the agreement. If any fees will be associated with the SMS marketing, you should also explain those fees in the initial message or the follow-up message, after the users are opted in. In some cases, users will give you both their phone number and email address. If you do get both a phone number and an email address, you can send the user an email containing all the relevant information. Next, you can send a text message explaining how to opt out and explaining that more information about the text-messaging program has been sent to the user via email. Be sure to include the email address to which that information has been sent.

In the United States, the burden of proof is on the sender to show that the person has opted in to receive the communication. Unfortunately, this can get complicated because many companies use third-party lists that they share with their related companies and affiliates. When lists are shared, it is important that the appropriate types of agreements and protections are in place to protect all parties involved. In U.S. lawsuits, anyone in the sending chain, including the original recipient of the opt-in, the third-party sender, the SMS gateway, and the carrier, can be found liable for legal violations. In general, it is a good idea to consult with an attorney instead of relying on advice from the carrier, the SMS gateway, or the third-party list provider.

If people are using a traditional website to sign up for email and mobile alerts, you should send a separate message to their email address and mobile phone number, explaining that they opted in to receive communication from the website and requesting that they respond to confirm their decision. This is called a double opt-in, and it is required for many types of digital marketing. Even when the double-opt in is not required, most customers prefer it.

If you are participating in SMS marketing, you frequently need to work with a third-party SMS gateway company to collect opt-ins and send out SMS. In many cases, these companies can be great resources for understanding how best to protect your customers' privacy. However, it is important to make sure that the gateway company adheres to the letter *and intent* of the law. When working with an SMS gateway, it is always a good idea to ensure that it understands that your opt-in list is a private asset that belongs to your company and can never be resold to other marketers.

Some marketers believe that mobile SMS and MMS spam will never be as much of a problem as email spam because carriers charge an incremental cost for each message sent—unlike email, which can sent with no incremental cost. This difference might hold back spammers for awhile, but SMS gateways are being developed internationally that allow messages to be sent with little or no incremental cost.

Running Mobile Sweepstakes and Contests

A very popular method of developing an internal list of people who are opted into mobile marketing messages is to run a contest or sweepstakes in which participants opt in to participate. Legally, this can be a bit complicated because marketers are expected to abide by an additional set of laws and regulations. In the United States, this can be difficult because many contests or sweepstakes can resemble a lottery, and the only entities that can legally run a lottery are the individual state governments—take measures to ensure that your campaign cannot legally be considered a lottery.

Legally, the three elements that constitute a lottery are consideration, compensation, and chance. To create a legal sweepstakes or contest, you must remove one of these three elements so that you are not considered a lottery. Although you are required to remove only one of the elements, it is best to remove or mitigate as many of the elements as possible. Simple awareness in the planning phases of your contest or sweepstakes can do a lot to ease this stress:

- **Consideration**—The consideration element is the payment to participate; if it were a lottery, it would be the cost of the lottery ticket. If you are running a mobile sweepstakes, the best thing you can do to eliminate consideration is to make it free to participate in the contest. Because premium text-messaging services charge money, it is a good idea to allow users to freely participate online as well.
- **Compensation**—The compensation element represents the winnings; in a lottery, this is the payout for a winning ticket. If you are running a mobile sweepstakes, consider offering prizes that have no monetary value, such as having the winners' names listed on a leader board. However, if the prize is a cash prize (or a prize that has monetary value), it will be impossible to remove this element from your legal concerns and you will need to look closely at the laws that govern cash prize payouts.
- **Chance**—The chance element simply means that the winner is determined randomly; in a lottery, this is the chance that the right lotto balls are drawn. In mobile marketing campaigns, the best way to eliminate this element is to base winnings on skill rather than chance.

Location-Based Marketing and Privacy

Location-based marketing messages can also be considered intrusive or even an invasion of privacy. If you are using location-based marketing, first ask permission to send a marketing message, either with a short "push" request from the Bluetooth

or WiFi beacon, or in a "pull" effort, using signage to encourage users to initiate the communication. After communication is initiated, in either scenario, it is important to explain what type of information you will be sending to people's phones and allow them to change their mind or save the communication to participate at another time.

Note

Location-based marketing is a form of marketing in which marketing messages are delivered directly to a user who is within broadcast range. For instance, a local eatery might broadcast nightly specials via Bluetooth to mobile users who have enabled their smart phones to receive Bluetooth messages. To learn more, see Chapter 6, "Mobile Promotion and Location-Based Marketing."

In the United States, the MMA has said that location-based Bluetooth marketing is permissible as long as you send an opt-in message to people who have set their Bluetooth devices to be discoverable. However, in the United Kingdom, the Direct Marketing Association believes that people should be opted in before they are sent a mobile marketing message via Bluetooth.

Respecting the Privacy of Children and Teen Mobile Users

The mobile Web presents unique challenges for those hoping to protect children's best interests. Most phones don't provide any means of implementing parental restrictions for what children can access on the phones—and carriers have yet to provide this as a service.

Children and teens can be a particularly lucrative target market for your mobile messaging, but many countries have established extra protections for their privacy and the types of mobile marketing they can receive. In general, do whatever you can to ensure that you are not targeting children with messages that are not appropriate for their age. This is especially true for campaigns that focus on adult content, gambling, alcohol, and tobacco.

No foolproof ways currently exist to protect minors from marketing messages that are not appropriate for them. The best way to ensure that you are legally marketing to people in the correct age demographic is to require them to input their birthday early in the communication. This means more than including a check box that says, "I am over 13 years old." Requiring the recipient to enter a specific date generates more accurate and honest responses. If participants are under 13, it is important

not only to stop sending messages to them, but also to not collect or store any of their information in your system.

Children pose a particularly interesting problem because younger generations are less concerned about privacy than any other age group. They are usually active users of social networking sites and accept terms and conditions to use a website or download content without a second thought. This cavalier attitude might simply be a sign of the times, but it also illustrates how important it is for marketers to be explicit and direct when explaining how private information might be used.

In Europe, 26 carriers participate in the European Framework for Safer Mobile Use by Younger Teenagers and Children, which establishes the need for access control to adult content, making it more difficult for teen users to be exposed. Regulations created in this agreement are put in place at a national level through self-regulatory codes of conduct.

On-Site Privacy and Mobile Cookies

On traditional websites, cookies are frequently used in the back end of the website management system to carry or save information about the user from previous visits. They can be used to store preferences, keep items in a shopping cart, or simply identify users in a system log. Cookies work in varying degrees on different types of mobile phones, but the acceptance and storage of cookies is improving in each new generation of smart phones.

Cookies are apparent to the user when a website displays the user's name or location upon arrival to the site. Cookies are also apparent to end users if they allow the site to save their login information so that they are automatically logged into the site. This type of seamless experience can be great on a mobile device because it limits the need for typing, but it can also be considered an invasion of privacy if it is done without express permission.

Cookies make some computer users and mobile users uncomfortable because they can save information about users' past interactions with a website, and those cookies might eliminate the need for a username and password to access private information. This can be particularly problematic on mobile phones because they are more susceptible to loss or theft than traditional computers. If cookies on a mobile phone give access to things such as personal financial information, health information, or even sensitive business information, loss of a phone could be quite catastrophic.

The best practice for using mobile cookies is to always inform users when you would like to use them and give the user the option of not installing the cookies. Because cookies generally improve the user experience, many users will opt into the

cookies, but those who are concerned will not do so. If you are using cookies on a sign-in form, you can include a "Keep me signed in" check box that the user can select if he or she would like the site to not require a username and password to be entered on each visit. To create the opt-in process for other aspects of the site, simply include a check box at the end of any form that users might fill out, asking if they would like the website to "remember this information for next time."

In some cases, you might want to require users to enter a password, even if they normally use cookies to access their personal information. This is especially true if you are allowing them to change or manipulate sensitive information, such as bank accounts, credit card information, travel confirmations, insurance, or health information. It is also a good idea to require that a password be entered whenever someone is submitting a purchase or making a change to a public-facing profile (such as a Facebook profile).

If you use cookies to control the session experience or to keep items in a shopping cart, it is important to test that the cookies are working on a variety of different phones. If you have mobile analytics in place, you should be able to find out what types of mobile devices are accessing your website the most. Then you can simply run tests on those types of handsets to ensure that everything is working correctly. If cookies are not working, the system can be changed to pass session variables in URLs instead of within cookies, but you must be careful to ensure that the URLs do not exceed the maximum length that the devices will handle.

Tip

URL length is measured in bytes, and most mobile phones and browsers can handle a URL length of more than 100KB, which is quite long. Keep in mind, though, that incredibly long URLs can hinder load time and make adding bookmarks difficult.

Mobile Malware and Viruses

Mobile viruses and malware also threaten the efficacy of mobile marketing because they put doubt in the minds of consumers, making them question whether to trust your company or the content you are sending. Until recently, the only groups that were highly concerned with mobile viruses were the antivirus software companies, whose "fears" were motivated mostly by their desire to sell mobile antivirus software.

All types of viruses and malware exploit operating systems. Viruses and malware are much easier to create and spread on traditional computers (desktop and laptop

systems) because there are relatively few operating systems. However, in the mobile world, it is much more difficult to write a virus that will affect a large portion of phones because so many different operating systems are available.

As the number of operating systems begins to consolidate and open-source operating systems become more common, the risk of mobile viruses and malware increases. A review of the different virus-related terminology is included here:

- **Malware**—An umbrella term for any malicious software, including viruses, Trojans, worms, and spyware.
- **Virus**—Code that inserts itself into another program and replicates when the host software runs. Viruses vary in potency from the relatively benign to the catastrophically destructive.
- **Trojan**—Otherwise known as a Trojan horse, this is a program that purports to be something the user would want to download, but actually harbors malicious code or viruses. In the mobile world, Trojans are usually masked as wallpapers, ringtones, or applications. It is important to note that sometimes Trojans attach themselves to legitimate programs and are installed when the legitimate program is installed.
- **Worm**—Worms are self-replicating viruses that automatically spread themselves across a network, usually taking advantage of a user's contacts or address book on an infected device. Worms can also spread via Bluetooth or WiFi.
- **Spyware**—Spyware is software that runs in the background of an operating system to collect and send private information about a mobile user's behavior to an unauthorized party. Information including private call logs, text messages, and picture messages can be distributed to a third party. Spyware infections can bring an otherwise healthy system to its knees because each spyware program is actually a small application that not only violates the user's privacy, but also hogs system resources from other legitimate applications.

Mobile viruses are a growing problem that threatens the efficacy of mobile marketing as an industry. As with viruses on traditional computers, mobile viruses can overwrite or delete system files, install corrupted applications, block antivirus software, block memory, or provide remote access to a user's phone. Mobile viruses are unique, in that they can be spread via a broader range of technology, including SMS, MMS, Bluetooth, WiFi, downloadable applications, and email. They can stop handsets from working properly or at all. Figure 13.2 shows the results of one such mobile virus.

Figure 13.2 *Mobile viruses are a growing concern for mobile phone users because viruses can masquerade as legitimate add-ons, such as wallpapers, themes, or ringtones.*

Mobile Privacy and Spam Laws

Although regulations can make mobile marketing more complicated, they are very necessary. Unregulated and unrestricted mobile marketing practices pose a serious threat to mobile communication. As mobile marketers, we must do what we can to preserve the creditability and trust for the mobile channel and technology so that we can continue to benefit from it in the future. If we do a good job encouraging the right type of regulations and best practices, we will be able to bolster the medium and protect its long-term value. Strengthening the channel will also encourage the development of new, better technology. On the other hand, if regulations are ignored or the wrong regulations are put in place, we could be placing our companies and our customers at risk.

The following sections provide more specific information about international mobile privacy and spam laws; important agencies, governmental bodies, and documents; and companies that can provide services to integrate with your mobile marketing campaigns to ensure that your customers' privacy is respected.

United States and North America

- **Federal Trade Commission (FCC)**—The FTC and state attorneys general are in place to curb unfair and deceptive trade practices. Some of the laws and regulations that they pass apply to mobile marketing campaigns. The general guideline is that all material terms and conditions of the offer must be "clearly and conspicuously" disclosed to the consumer prior to the buying decision.
- **Federal Communications Commission (FCC)**—The FCC is an independent U.S. government agency, reporting directly to Congress, that regulates interstate and international communications by radio, television, wire, satellite, and cable. The FCC controls what information

about mobile customers can be shared and how, but the guidelines have yet to be passed. The FCC has allowed mobile carriers to release data about their subscribers, but only upon the individual consent of the consumer. The FCC also has passed regulations that prohibit the use of autodialers to call or send text messages to mobile phone numbers. Many states have their own rules and regulations on these and other telemarketing issues. The FCC also regulates Voice Over IP (VoIP) and phone number porting (keeping the same phone number even if the user switches carriers), which both could affect a mobile marketing campaign. The FCC also prevents telemarketers from calling cellphone numbers.

- **Telephone Consumer Protection Act (TCPA)**—Congress passed the TCPA in 1991, restricting the use of automatic dialing systems, artificial or prerecorded voice messages, SMS text messages received by cellphones, and the use of fax machines to send unsolicited advertisements. Advertisers are not permitted to make solicitation calls before 8am and after 9pm local time, and may not ever make telemarketing calls using autodialers and voice recordings.
- **Telemarketing Sales Rule (TSR) and Amended Telemarketing Sales Rule**—The FTC established the TSR in 1995 but significantly amended it in 2004 as the ATSR. The most important thing this bill did was establish the National Do Not Call Registry. It is important to note that the rules established in this act cover all acts of telemarketing, whether the conversation is initiated by the telemarketer or the customer. This can come into play if you are using mobile marketing to drive phone calls to complete sales or make customer acquisitions.
- **Do Not Call Registry (DNC)**—Created in 2003, the DNC is a list of individuals' residences and phone numbers that would prefer not to receive telemarketing calls. It is illegal for solicitors to call these phone numbers. Business lines cannot be added to the registry. Charities and surveys are exempt, as are companies that you are doing business with or whom you have requested information from in the past three months.
- **CAN-SPAM**—This act was passed in 2003 to restrict commercial email by ensuring that mechanisms for opting out or contacting the sender directly are included. This law covers email on the traditional computer and on the mobile phone, but does not cover text messaging or other types of mobile messaging. It would be possible to add a Do Not Email Registry under this law, but the FTC determined that it would be too difficult to verify email account information, so this was not feasible.

- **M-SPAM**—This is a proposed U.S. Senate bill that would criminalize mobile SMS spamming in the same way CAN-SPAM criminalized email spam. As it is currently proposed, it would empower the FTC and the FCC to curb unwanted text messages in the United States. The proposed legislation might currently be too stringent, because it suggests the creation of a Do Not Contact type of registry, to block all text message marketing to some phone numbers. As it is proposed now, the Do Not Contact Registry will, by default, include all the phone numbers on the current Do Not Call Registry. This would prevent mobile marketers from ever sending text messages to those numbers, even if consumers later wanted to opt into a campaign.

  Many members of the mobile marketing community hope that a separate Do Not Text list will be created rather than grouping telemarketing protection and text message protection into the same list, because the two are very different. Alternately, some members of the community believe that any kind of list that blocks certain phone numbers from being contacted via text message would be too restrictive. In fact, some members of the mobile marketing community believe that a list such as this might actually prevent users from getting communication that they have explicitly opted into and actively want, such as SMS search from Google or Cha-Cha.

- **Children's Online Protection Act (COPA)**—The Children's Online Protection Act, otherwise known as COPA, prevents companies from collecting or storing information about people under 13 years old. This is important for mobile marketing, as many contests, sweepstakes, and other participatory initiatives are for products typically targeted at people in that protected age group.

- **Mobile Marketing Association (MMA)**—The MMA is an international group of mobile carriers, content providers, marketers, and other interested parties that helps establish the best practices in the industry. Although the MMA does have international representation, it is based in the United States, and most of its initiatives focus there first. None of the group's privacy guidelines are binding or enforceable, but the MMA is frequently referenced as providing accepted standards when clear-cut laws are not present. The MMA frequently publishes and updates mobile marketing best practice documentation, as well as industry reviews and articles.

- **Direct Marketing Association (DMA)**—The DMA is an international organization based in the United States that helps develop and guide direct marketing best practices. Although its focus is not exclusively mobile, the DMA is quite interested in the development of and adherence to privacy-related standards in the mobile marketing industry. The DMA has published a variety of articles, briefs, and codes of conduct related to mobile marketing.

United Kingdom

- **Data Protection Act (DPA)**—The DPA is the main legislation that protects personal information of individuals in the United Kingdom. Parliament passed this act in 1998, and it essentially limits how personal information, including email addresses and phone numbers, are used, processed, and protected in the United Kingdom. According to Wikipedia, it has the following eight principal requirements (many of these requirements are also echoed by the EC Directive, which sets forth similar expectations for all countries marketing throughout most of Europe):
    - Data may be used only for the specific purposes for which it was collected.
    - Data must not be disclosed to other parties without the consent of the individual whom it is about.
    - Individuals have a right of access to the information held about them.
    - Personal information may be kept for no longer than is necessary and must be kept up-to-date.
    - Personal information may not be sent outside the European Economic Area unless the individual whom it is about has consented or adequate protection is in place.
    - All entities that process personal information must register with the Information Commissioner's Office.
    - Entities holding personal information are required to have adequate security measures in place. Those include technical measures (such as firewalls) and organizational measures (such as staff training).
    - Subjects have the right to have *factually incorrect* information corrected.

- **Privacy and Electronic Communications Regulation (PECR)**—PECR created a directive known as the EC Directive that requires marketers to have opt-in permission or a prior commercial relationship with a person before they send a mobile marketing message. Marketers are also required to identify the sender of the message, provide a valid reply address, and make it easy for recipients to unsubscribe from future communication. The PECR does not require that Bluetooth marketing be opted into.
- **Computer Misuse Act**—This act makes it illegal for someone to knowingly use a computer to secure access to programs or data that is not lawfully theirs or to make unauthorized modifications to computer files or programs. It also makes it illegal for people to impersonate someone in email, chat, or a social networking site. The act was essentially put in place to make hacking and the creation and intentional spreading of viruses and malware illegal. Prescribed penalties range from a fine to five years in jail. The act does an adequate job of addressing digital privacy issues in the United Kingdom.
- **Information Commissioner's Office (ICO)**—The ICO is an independent agency in the United Kingdom, set up partially to protect citizens from unauthorized collection and distribution of personal information. The ICO is in charge of education, enforcement, and resolution of issues related to the Data Protection Act and the Privacy and Electronic Communications Regulations. This includes preventing unwanted solicitation via telemarketing, email, or mobile communication.

Important Mobile Agencies

The bodies below are official groups that help regulate and set guidelines about what is acceptable for mobile marketers. While none of these agencies have the ability to enforce their guidelines or Best Practices, governments look to them when developing laws and trying to police the market.

The Groupe Speciale Mobile (GSMA)

In 1982, the Confederation of European Posts and Telecommunications (CEPT) formed the Groupe Speciale Mobile (GSM) to design a European mobile technology. Over time, this has evolved to become the worldwide authority on mobile communication. The mission of the GMS is to "create value for operators and the mobile industry in the provision of services for the benefit of end users, so that those users can readily and affordably connect to and use the services they desire, anywhere, anytime." The group has led the way to develop worldwide initiatives to

advance the adoption and development of new mobile technology to enhance communication and improve worldwide access to information. The GMS also helps represent the mobile technology industry to mobile regulators and policy makers, ensuring that mobile carriers, consumers, and content providers are protected evenly. The group has also created a series of world-renowned conferences, including the annual Mobile World Congress in Barcelona.

In addition, the GSM has created best practice documentation to help carriers respect and protect the privacy of their subscribers.

The Mobile Marketing Association (MMA)

In 1996, the Mobile Marketing Association was formed to help stimulate growth in mobile marketing by encouraging communication among mobile carriers, content producers, and handset manufacturers. According to the MMA mission statement, the group is:

> An action-oriented association designed to clear obstacles to market development, to establish guidelines and best practices for sustainable growth, and to evangelize the mobile channel for use by brands and third party content providers. MMA members include agencies, advertisers, hand held device manufacturers, wireless operators and service providers, retailers, software and services providers, as well as any company focused on the potential of marketing via the mobile channel.

The MMA describes its goals in the following terms:

- Providing an industry forum to meet, discuss, plan, and work cooperatively to resolve key industry issues
- Bringing together industry-wide global and regional work groups that focus on industry initiatives
- Providing representation for the mobile marketing industry to major legislative bodies worldwide
- Sharing perspectives on mobile marketing among Europe, Asia, Latin America, Africa, and the United States
- Fueling peer-to-peer interaction through seminars, conferences, and events
- Developing metrics for measuring ad delivery and consumer response
- Developing open and compatible mobile marketing technical and creative standards

- Defining and publishing mobile marketing best practices and guidelines on privacy, ad delivery, and ad measurement
- Providing the value and effectiveness of mobile marketing to advertisers, agencies, and consumers
- Serving as the key advocate on behalf of the mobile marketing industry

The World Wide Web Consortium (W3C)

The World Wide Web Consortium (W3C) is a nonprofit organization that creates specifications, guidelines, software, and tools to aid in the development of a better Internet and, in their words, "to lead the Web to its full potential." It has developed a variety of standards for coding languages, including mobile-compliant XHTML and WML.

The Direct Marketing Association (DMA)

The Direct Marketing Association is the leading global trade association of business and nonprofit organizations using and supporting multichannel direct marketing tools and techniques.

The DMA advocates standards for responsible marketing, promotes relevance as the key to reaching consumers with desirable offers, and provides cutting-edge research, education, and networking opportunities to improve results throughout the end-to-end direct marketing process. Founded in 1917, the DMA today represents more than 3,400 companies from dozens of vertical industries in the United States and 48 other nations, including half of the Fortune 100 companies, as well as nonprofit organizations.

Mobile Marketing Legal and Privacy Resources

- GSMA Europe's Safer Mobile Use—www.gsmeurope.org/safer_mobile/index.shtml
- European Framework for Safer Mobile Use by Younger Teenagers and Children—www.gsmeurope.org/safer_mobile/european.shtml
- Safe Mobile Use by Younger Teenagers & Children, Implementation Report—www.gsmeurope.org/documents/gsma_implementation_report.pdf
- The Privacy and Electronic Communications Regulations (EC Directive)—www.opsi.gov.uk/si/si2003/20032426.htm

- GSMA Mobile SPAM Code of Conduct—www.gsmworld.com/documents/mobile_spam.pdf
- Guidance for Marketers on the Privacy and Electronic Communications Regulations of 2003 (the EC Directive)—www.ico.gov.uk/upload/documents/library/privacy_and_electronic/detailed_specialist_guides/guidance_part_1_for_marketers_v3.1_081007.pdf
- DMA-UK Guidelines for Bluetooth Marketing—www.consumer-preference.com/2007/10/bluetooth-marketing-ico-removes.html

MMA Mobile Privacy Code of Conduct

The Mobile Marketing Association Privacy Advisory Committee launched a code of conduct for mobile marketers in 2003 that covers six basic privacy concerns: choice, control, customization, consideration, constraint, and confidentiality. A summary of these six basic privacy concerns can be found at www.cellular.co.za/regulatory/code_of_conduct_for_mobile_marke.htm and is paraphrased here.

- **Choice**—Consumers must be given the option to opt-into all mobile messaging programs. Segmentation-based marketing is prohibited unless consumers opted-into the program.
- **Control**—Consumers must be able to easily opt-out of any mobile messaging program. If your program has multiple message strings, you must provide an opt-out option in each one.
- **Customization**—Since mobile messaging campaigns are most effective when targeted based on the consumers' interests, follow-up communications with consumers should be confined to those areas specifically requested by the consumer.
- **Consideration**—You must offer the consumer something of value in return for agreeing to receive your messages.
- **Constraint**—You must manage the number of messages an individual consumer receives. Consumers must have the option to limit the number of messages they receive even further if they wish.
- **Confidentiality**—You must not share consumer information gathered during your marketing with other companies except to provide products and services requested by the consumer.

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14

The International Mobile Marketing Landscape

Without a doubt, mobile marketing is an international phenomenon. Mobile Web traffic continues to grow worldwide, but not all markets are ready to receive sophisticated Web-based mobile marketing campaigns. Figures 14.1 and 14.2 show mobile advertising spending and mobile search advertising spending worldwide for the past three years, as well as anticipated spending for the next three years. Although most of this book focuses on mobile marketing strategy in North America and Europe, your understanding of the differences among the various regions can play a crucial role in the success of your mobile campaign if you are focusing on an international audience.

Mobile Advertising Spending Worldwide, by Format, 2007-2012 (millions)

	2007	2008	2009	2010	2011	2012
Mobile message advertising*	$2,560	$4,200	$6,440	$9,260	$11,960	$14,173
Mobile display advertising**	$52	$142	$338	$629	$945	$1,203
Mobile search advertising***	$83	$244	$597	$1,290	$2,345	$3,773
Total	$2,695	$4,586	$7,375	$11,179	$15,250	$19,149

*Note: numbers may not add up to total due to rounding; *spending on placement in text messages, includes direct spending on message campaigns as well as spending on promotional coverage of end-user messaging costs; **spending on display banners, links or icons placed on WAP, mobile HTML sites or embedded in mobile applications such as maps or entertainment services (e.g. games or video); ***spending on sponsored display ads and text links that appear alongside mobile search results, as well as spending on audio ads played to mobile phone callers making a directory inquiry*
Source: eMarketer, March 2008

092628 www.eMarketer.com

Figure 14.1 *Mobile advertising spending worldwide. Chart courtesy of eMarketer.*

Worldwide Mobile Search Advertising Spending, by Region, 2007-2012 (millions)

	2007	2008	2009	2010	2011	2012
US	$34.5	$107.4	$241.8	$530.5	$910.2	$1,484.2
Asia-Pacific	$26.0	$72.0	$189.9	$372.8	$732.4	$1,160.0
Western Europe	$18.4	$52.0	$140.5	$339.7	$614.1	$968.2
Rest of World	$4.4	$12.4	$24.4	$47.0	$88.6	$160.9
Worldwide	**$83.3**	**$243.7**	**$596.6**	**$1,289.9**	**$2,345.2**	**$3,773.2**

Note: includes spending on sponsored display ads and text links that appear alongside mobile search results, as well as spending on audio ads played to mobile phone callers making a directory inquiry; Western Europe includes France, Germany, Italy, Spain, UK; Asia-Pacific includes China, India, Japan, South Korea; numbers may not add up to total due to rounding
Source: eMarketer, February 2008

092113 www.eMarketer.com

Figure 14.2 *Mobile search advertising spending worldwide. Chart courtesy of eMarketer.*

Regional deployment of technology and mobile network infrastructure are important considerations when launching a mobile campaign. Also, cultural acceptance and understanding of different mobile marketing channels can make or break a campaign, so research must be done to ensure that your campaign will succeed. This chapter offers a high-level outline of the key differences among regions and how you can leverage those disparities to make the most of your mobile marketing dollars.

Note

Statistics and methodologies vary dramatically between the different reporting services. Use the charts and numbers in this chapter as a guide more than anything else.

Mobile Marketing in East Asia

Mobile marketing in East Asia is significantly different than mobile marketing in the rest of the world. Figure 14.3 shows mobile advertising spending in the Asia–Pacific region. The mobile programming language, WAP, was slow to take off in Europe and the United States but was quickly embraced in Asia. The quick adoption in East Asia was likely the result of the high level of communication between the mobile carriers, device manufacturers, and the mobile content creators. In most other countries in the world, carriers did little to create incentive for Web content creators to build out WAP content, so there was a dearth of understanding or enthusiasm.

Mobile Advertising Spending in Asia-Pacific, by Segment, 2007-2012 (millions)

	2007	2008	2009	2010	2011	2012
Mobile message advertising	$700	$1,229	$1,827	$3,100	$4,309	$5,320
Mobile display advertising	$12	$36	$91	$182	$293	$397
Mobile search advertising	$26	$72	$190	$373	$732	$1,160
Total	**$738**	**$1,336**	**$2,108**	**$3,655**	**$5,334**	**$6,877**

Note: China, India, Japan, South Korea; numbers may not add up to total due to rounding
Source: eMarketer, March 2008

092636 www.eMarketer.com

Figure 14.3 *Mobile advertising spending in the Asia–Pacific region. Chart courtesy of eMarketer.*

In East Asia, the WAP programming language was primarily used to create separate, mobile-specific websites on dotMobi domains that are represented as example-domain.mobi. In many instances, companies would have two domains, one traditional domain, and one dotMobi domain. This is quite different from the rest of the world, where WAP and thus dotMobi domains were slower to take off.

The debate about the dotMobi domain still rages on in the international sphere. Some people believe that a separate mobile experience on a separate domain extension is desirable, while others believe that the separate domain extension only causes problems and confusion. Many companies and individuals invested a lot of money in the dotMobi domain extension and in the development of dotMobi sites.

In East Asia, mobile access to the Web is considered fundamentally different from traditional access to the Web. Many users have email addresses that they use solely on their mobile phones (a system called mobile i-map), and businesses commonly have mobile-specific sites. In the rest of the world, especially in Europe and the Unites States, most Web content that can be accessed on a mobile phone is an extension of the existing Web instead of something fundamentally different.

One element of the accelerated adoption rate in East Asia relates to lack of choice. Much of the population in countries such as China and Taiwan do not have Internet access at home, so if consumers are interested in finding information, they must use their phone to do it. The quick spread of mobile marketing methodologies in East Asia can also be attributed to the size of the cohesive mobile landscape of these countries. It is much easier to create a common paradigm across large countries such as China, or countries with unified mobile standards such as Japan, than it is to do the same thing in a multitude of smaller countries that are geographically proximate but have different cultures, languages, carriers, and governments, such as in Europe.

3G access accounts for more than 80% of the mobile market in Japan, and carriers there are quickly deploying 4G technology. China owns the world's largest traditional telecommunication networks, but they are less advanced in mobile telecom, with a large portion of subscribers still relying on GSM networks. In 2008, the Chinese government set up and deployed many 3G networks for commercial launch in anticipation of the Olympic games, but many Chinese service providers are testing LTE technology instead. The Chinese government finalized the issuance of 3G licenses in the first week of 2009, and this should help advance the mobile marketing opportunity in China, but Chinese carriers may opt to focus on LTE and largely skip the deployment of 3G technology.

Prepaid mobile service is quite common in China, where the mobile networks are less developed. Prepaid mobile services are less common in Japan and Singapore. Singapore's first prepaid mobile network launched as recently as 2009, and it is

targeted at tourists and business travelers. The service offers three-day unlimited data and voice packages for about $12.

Companies that want to launch mobile marketing campaigns in East Asia must be aware of rules and regulations regarding this type of marketing. In 2005, however, the Ministry of the Information Industry (MII) in China set up regulations about sending unsolicited text messages and disclosure requirements for companies who enroll customers in subscription services that have a recurring cost to the customer. Carriers enforce these regulations, but many worry that text messages that include content that the government deems inappropriate (possibly including dissenting political opinions) may be filtered, too.

In the Asia–Pacific region, there is a much more prominent demographic gap between those accessing the mobile Web on their phones. People under age 25 are more than twice as likely to access the Internet on their phones as their older counterparts. The younger age group is also twice as likely to have sent a picture message (MMS).

Mobile display advertising is more popular in Japan and China than anywhere else except the United States. More than 10% of online marketing budgets in Japan is already being spent on mobile ads, and this is expected to be worth more than $1 billion by 2011.

In Japan, a uniform platform standard called iMode, makes it easier for marketers to create and display ads across a variety of different devices, without having to duplicate the effort to make the same marketing work across a number of different platforms.

Studies show that 54% of Japanese mobile users consume ads, and 44% actively click on mobile ad links. Many mobile carriers have launched their own mobile advertising arm, such as D2 in Japan or Across in South Korea. When asked about the future of mobile advertising in China, Alvin Graylin, the CEO of China's largest mobile service provider, mInfo, said:

> "My prediction is that, within five to six years, mobile marketing will overtake online marketing in China because the user base will be so much more massive. It's not far-fetched when you look at 800 million Chinese mobile subscribers, compared with 300 million accessing the Internet through a PC."

Quick Response (QR) codes were actually developed by a car manufacturer in Tokyo. They are small, square dot matrices that can be scanned by a camera phone (like a barcode) and used to bring up text, phone numbers, ready-to-send text messages (SMS), or a phone number (see Figure 14.4). These codes can appear in a periodical, a flyer, billboards or just about any other printed medium. The use of QR codes is much more prevalent in Japan, China, North Korea, and South Korea

than it is in the rest of the world, partially because most mobile phones in these countries come with QR code reading software already on the phone. They are particularly useful as a substitute for digitally typing information into a cell phone because many characters in Asian languages require 2.5 keystrokes to represent on a phone. More than 40% of mobile subscribers in Japan use their mobile phones to regularly scan QR codes in ads.

Figure 14.4 *QR codes can be scanned from a magazine, newspaper, billboards (as shown here) or other other advertisements with a camera phone to store information. Photo courtesy of Nicolas Raoul via Wikimedia Creative Commons License 3.0, a freely licensed media repository.*

SMS and MMS are also popular throughout the Asian continent, but SMS is between 35% and 75% more common than MMS (multimedia messaging). The prevelance of SMS marketing is very high; SMS is being used by 93% of subscribers under 25 in Singapore, 86% in Thailand, and 83% in Taiwan.

Mobile music has been important in China for some time because many carriers are offering mobile music services to their subscribers to help monetize their services. At the 3GSM World Congress in 2005, Wang Jianzhou, CEO of China Mobile, said, "The total revenue of mobile music in China last year surpassed the entire

revenue of the traditional music industry. A single song was downloaded 15 million times over China Mobile's network in the last six months, a rate 15 times higher than a typical best-selling music CD."

Mobile gaming is also important in Japan; depending on your target market, it could be the cornerstone of a successful mobile marketing campaign. Whereas mobile gaming applications are all the rage in the Western world, mobile gaming websites are more common in East Asia. A Japanese survey of 15- to 29-year-olds in 2008 revealed that 79% play games on their mobile phones and 31% would be willing to pay a reasonable monthly price to play the mobile games. Payment for games may not be necessary, though: Mobile games can also be subsidized or sponsored with mobile marketing so that the game can be offered for free and still generate revenue. Role-playing games, puzzles, and table games are the most popular. Surprisingly, more women than men play mobile games.

East Asia's total interactive market will probably always be smaller than that of the United States, but its mobile component will be proportionally larger. Mobile technology is highly ingrained in the East Asian culture, and the people are quick to adopt and test new mobile technologies. Mobile video and mobile social networking are common in the region and offer great opportunities for marketing, branding, and customer engagement. Also, a program called i-mode FeliCa allows people in Japan to insert chips into their phones to turn their handsets into a payment device that can be swiped over a sensor at a point of purchase, for use much like a credit card. (In some cases, it can even be used as a home or office key.)

Mobile Marketing in Southeast Asia

The Southeast Asian markets lag behind the East Asian markets in terms of mobile broadband communication and the prevalence of mobile marketing. In this region, prepaid mobile service is popular, as is text message communication, because of its comparative cost savings over voice communication. Multi-SIM use, whereby users will have multiple SIM cards or phones that they use at different parts of the day to get the best calling rate is also common.

In Southeast Asia, the separation between the exclusively mobile Web and the exclusively traditional Web is still present but less prevalent. Mobile penetration rates in the Philippines are around 77%, but the penetration of broadband Internet communication is low, at around only 2%. In Malaysia, adoption of both types of communication is higher, with mobile penetration at 100% and traditional broadband communication at about 15%.

Mobile number portability (MNP) is a system that allows mobile users to keep the same phone number when switching from one mobile carrier to another, and it has been a major debate in this region. The debate still continues in the Philippines,

where the government indefinitely postponed plans for MNP in 2008. In this case, the difficulty in transitioning to portable mobile phone numbers is due not to problems with voice communication, but to the difficulty of routing the massive amount of text messages that are being sent in India through a central hub and then out to the various carrier networks.

In Southeast Asia, mobile marketing is regulated but not generally well enforced, and is targeted at carriers instead of independent content creators. Malaysia has no major regulation, but in the Philippines, the National Telecommunications Commission (NTC) revokes the mobile license of any operator found guilty of breaking its guidelines on unsolicited broadcast messaging via SMS.

In Vietnam in 2009, the Vietnam Computer Emergency Response Team (VNCERT) issued regulations to reduce the number of spam SMS sent in the country. According to these regulations, networks must label outgoing bulk advertising texts as such, and customers must be given the chance to refuse the text before receiving it. Companies that send marketing SMS messages must register their content and notify subscribers about the costs of sending SMS to their premium shortcodes.

Although there have been large initiatives for the deployment of 3G networks in Southeast Asia (since 2005 in Malaysia), only 5% of Malaysia is on 3G networks and that number is even lower in the Philippines. SMS communication is considered an effective alternative for spreading news and information quickly, without the use of fast networks. Because SMS is so well accepted, it is also more appealing as a channel for mobile marketing. The spread of 3G technology is expected to push the growth of VoIP and mobile technology and adoption, but this will likely take a few more years.

Mobile Marketing in India

The situation in India is very different from that in the rest of Asia, so it should be considered separately. No major governmental regulations address mobile marketing, but a number of hurdles that are deeply rooted in the government and the culture that must be understood to really determine how mobile marketing can be used most effectively in India.

Infrastructural and cultural barriers have stifled the growth of broadband adoption and computing in India. Although the adoption rates for broadband computing are high in major cities, the rest of the country lags behind. In some cases, the electricity needed to power computers can be unstable, even in the most progressive states. Corporations such as Microsoft and Nokia are working with the Indian government and nongovernmental organizations to teach computer skills to all primary schools. This type of enculturation, unprecedented in India, should help drive demand for computing as a whole and especially for mobile computing because

mobile handsets are cheaper and easier to get online than traditional computers or laptops.

India, like other countries with infrastructural barriers, will largely skip the copper-wired means of broadband communication because it is so prohibitively expensive for both users and service providers, especially in more rural areas of the country. Instead, wireless broadband will be the norm, and people will access it through mobile phones or laptops with wireless data cards or dongles. However, this will happen only if the government cooperates with telecom providers to hasten the availability of 3G communication.

The mobile penetration rate in India is still low, at only 27%, but the market has been growing at around 50% per year. It is expected to continue this rapid growth over the next two years. So far, this growth is all happening on the 2G network. The Indian government has not yet allocated the 3G network spectrum, but the auctions are expected to happen in 2010. Surprisingly, India's per-minute mobile rates are the lowest in the world, and handset prices are also very low. Some service providers even offer incentives such as a lifetime of free incoming calls for a one-time payment of about $21. But the lack of 3G penetration has slowed the adoption and sale of smart phones, which has prevented growth in access to the mobile Web.

Two official bodies must agree on decisions that involve the telecom industry: the Telecom Regulatory Authority of India (TRAI) and the Department of Telecommunications (DoT), which is housed under the Ministry of Communications and Information Technology. The Cellular Operators Association of India (COAI) represents the mobile carriers' interests but is frequently at odds with the decisions of the TRIA and the DoT.

In general, the Indian government is reluctant to work with mobile carriers and traditional ISPs. This resistance is probably to protect the profits of traditional cable-wire telecoms from further erosion and to provide fair competition. Unfortunately, the Indian government has even banned some types of VoIP, which can be seen as a serious detriment to a country that is trying to advance the adoption of new technology and improve communication and education country-wide.

As a result of the many technological stumbling blocks, mobile marketing in India lacks the sophistication of similar marketing in the rest of the Asian continent. To date, mobile marketing in India has focused on simple text and picture messages, but the recent governmental approval of the operation of mobile virtual network operators (MVNOs) and the future deployment of 3G and WiMax networks promises to change that situation quickly.

In terms of mobile marketing, the most effective channel is still text messaging. Before you send a message, you must check your list of recipients against the National Do Not Disturb (NDND) Registry. This registry, created by the TRAI in

2007, makes it illegal to send marketing messages to subscribers who are on the list and have not opted in to your marketing communication.

Mobile gaming is also popular in India, beating out email for top use of the mobile Web by 5%. This is likely a result of the lower percentage of people with email addresses in the country, but it may indicate a predilection toward more graphical interactive marketing when 3G networks are in place. Because of the less-capable mobile handsets, mobile gaming in India focuses on simple Web-based games and puzzles instead of downloadable applications. In many cases, there are display advertising opportunities on mobile game sites or within the mobile games themselves.

Mobile Marketing in the Middle East

Mobile penetration in some Middle Eastern countries is quite high, with countries such as Israel boasting more than 125% (people have 1+ phone[s] or SIM cards to get the best value out of various carriers pricing packages). Other countries have lower penetration rates that are still impressive: 85% in Turkey and 80% in Jordan. Recent increases in competition across the region have driven the cost of mobile service down and the level of service up.

Most Middle Eastern countries have instituted policies to drive competition within the market. Liberalization, privatization and the increase in competition have created a great benefit for the mobile community. Although most countries in the Middle East are still wrestling with more technological challenges, such as the desire for mobile number portability (MNP) and the potential to open the market to mobile virtual network operators (MVNOs), there is great promise.

The rapid growth and adoption of mobile phones has been achieved largely on 2 and 2.5G networks. Only about 25% of subscribers are on high-end phones because of the lack of 3G connections. The lack of rich mobile content available makes more expensive phones unnecessary. Mobile personalization services such as ringtones, logos, and desktops are popular, but they are downloaded over 2G networks. Mobile banking and news services are growing rapidly, and many interactive agencies are partnering with content and application service providers to secure technology and delivery capabilities now.

Direct marketing as a whole is less common in the Middle East than it is in Europe, and this may give mobile marketing companies that provide a more personal or tailored marketing message a serious leg up over the competition. More targeted communication should be approached very cautiously and directed exclusively at people who have opted in, to avoid offending potential customers who are not as used to such targeted messages.

Mobile Marketing in Africa

Africa is expected to be a leader in the growth of mobile broadband subscriptions from 2008 through 2012, and is expected to more than double its rate of mobile data consumption by 2014.

Some 3G networks were initially deployed in Africa in 2005. Now more than 30 operators are providing service throughout the major cities and are expanding their reach into the more rural regions of the continent. Despite the deployment of these networks, you still need a PC to reach broadband speeds, so network operators and private businesses have began opening Internet cafes that are run largely on cellular connectivity.

The situation in Africa is much like the situations in Southeast Asia and India, where access to traditional fixed-line Internet is prohibitively expensive or impossible for most people to access regularly, but mobile phones and access to data have seen a large uptake. Across the continent, 3G subscribers are quickly outpacing fixed-line broadband subscribers, and many are using data cards to connect to the Internet wirelessly on laptops or mobile phones.

Before the advent of mobile communication, many people in more remote areas in Africa had no home phone lines or computers. Mobile voice and mobile data have become the default means of communication. In more remote regions in Africa (and also in India), the mobile boom has created a large informal market for reselling mobile airtime: One or two people in a village purchase a cell phone and charge other villagers to use it.

Many other challenges threaten to stall the growth of mobile penetration. In Africa, the cost of mobile handsets is comparatively high, making having your own mobile device more of a luxury than it is in other places. Also, unstable electricity has made the development of stable mobile networks very expensive; operators need their own power generators to effectively serve their customer base. Those costs are passed directly to the consumer, increasing the cost of mobile voice and data service. To address these infrastructural problems, some companies, such as Erickson, have begun to install solar stations for recharging the cell phones and base stations.

Prepaid mobile access is the norm in Africa, and mobile marketing is still focused on text message marketing. However, advances in the technology and penetration are spawning new services such as micropayments, prepaid recharging, single-rate inter-regional roaming, and the uptake of m-commerce applications.

Mobile Marketing in Central and South America

Mobile penetration in Central and South America is well above average, with at least three countries at greater than 100% penetration. High prices and a lack of

competition have stifled wired broadband access, so mobile phones have overtaken fixed lines in service. Paraguay leads the trend, with 10 mobile phones for every fixed line in service. GSM is the preferred technology by far, with a market share of around 69%, but Latin America is also at the forefront of global WiMAX deployment. Licensing of the 3G spectrum in Latin American countries is much cheaper when compared to the rest of the world, and the advancement of these technologies will further open the region to more sophisticated mobile marketing channels.

Countries in Central and South America generally have many more mobile carriers than other countries of a similar size, making mobile marketing challenging. No uniformity in advertising standards exists, making mobile marketing difficult. Working with the multitude of carriers in these regions can require diplomacy and patience.

Unfortunately, the mobile handset technology available lags behind that of other regions, so WAP sites and mobile Web access should be downplayed in your mobile marketing campaign. Mobile SEO is not yet relevant. Standard text and picture message marketing is more likely to be effective because mobile Web traffic is so low that content creators are not incentivized to create compelling content, and advertisers are not compelled to pay for mobile advertisement. Nonvoice features on the phone, such as text messaging, picture messaging, Bluetooth, and infrared, are used more heavily and are considered more important when choosing a phone.

In South America, mobile marketing is being used to foster interaction and create communities around well-established brands. The region is seeing growth in the consumption of mobile music and videos. Mobile ticketing, proximity marketing, and QR code marketing may be in the future for Latin America, but marketers will have to work diligently with carriers to make these possibilities realities.

Mobile Web marketing may not be as effective in South America, but mobile couponing and QR codes are well received, and mobile advertising is growing in acceptance. According to an article by the MMA in 2008:

> "Latin America continues to be a global leader in consumer adoption of mobile services," said Terence Reis, managing director, LATAM of the MMA. "Nearly two-thirds of mobile users in Latin America are at least moderately interested in mobile marketing and a quarter express strong interest in marketing programs."

Mobile Marketing in North America

Differences in infrastructure and the penetration of high-speed mobile networks cause noticeable differences between the use of mobile phones in the United States, Canada and Mexico. Over all though, the launch of the iPhone has done a lot to

shape mobile marketing in North America, most notably making downloadable applications mainstream, vastly improving the mobile Web experience, and making streaming music and video a simple reality for many subscribers. The iPhone has drastically changed the expectations many North Americans have for their phone, but iPhones still make up only about 8% of the market. Although iPhones are now available in more than 88 countries worldwide, the acceptance and fundamental shift in thinking that the device has caused is most notable in the United States.

The United States were the first to build a nationwide network of mobile towers, speeding the overall adoption of cell phones. Unfortunately, the towers that were built were equipped to handle only slower analog and digital signals instead of the faster 2 and 3G connections. Until recently, the slower network speeds have prevented many subscribers from using their phones for anything other than calls and text messages. Much work has been done to improve mobile networks in the United States: In 2009, the penetration of 3G in the United States reached the same level as in Western Europe, at 28%.

Mobile number portability (MNP) became a reality in the United States in 2005, but multi-SIM card use is not the norm. Some subscribers do have more than one phone, but rarely because they are trying to save money; usually their employer provides a work phone and they keep a personal phone, for use when they are off the clock. Mobile calling and data rates in the United States are on par with those of the rest of the world, but in Canada, rates for both are much higher, which is proving to be a great disincentive for the consumption of mobile content.

The other thing that has slowed the adoption of mobile marketing in the United States and Canada is the carriers. Different carriers offer different services. They include different browsers on their phones, with different capabilities to reach "off-deck" content. Marketers have no uniform set of standards to follow to create a predictable mobile marketing experience across the different carrier platforms.

The interactive nature of the U.S. marketing space means that the United States offers far more opportunities for cross-media efforts than any other country in the world. The United States is the largest single market for mobile advertising, even though it lags behind both Europe and Asia in terms of mobile penetration (see Figure 14.5). Mobile marketing is not as developed or ingrained in the U.S. market as it is in East Asia, but it has promise. In 2008, about 23% of mobile subscribers in the United States reported seeing an advertisement on their phone, and about half of those reported that they had responded at least once to a mobile advertisement. Simple text and picture messages may be ideal for other regions, but the North American audience is expecting a richer, integrated experience that loops their mobile phone into existing marketing campaigns.

US Mobile Internet Users, Mobile Search Users and Mobile Search Advertising Revenues, 2006-2011 (millions)

	2006	2007	2008	2009	2010	2011
Mobile Internet users	27.0	31.1	36.0	42.9	52.3	64.8
Mobile search users	20.3	23.3	28.8	35.1	43.9	55.8
Mobile search ad revenues*	$2.1	$13.5	$48.1	$155.7	$307.4	$713.7

*Note: *earned from sale of display or text listings alongside mobile search results*
Source: eMarketer, July 2007

085441 www.eMarketer.com

Figure 14.5 *Mobile users and revenue in the United States. Chart courtesy of eMarkerter.*

Although the United States currently leads in mobile traffic and in ad spending, it is significantly behind European countries such as Italy and Spain in terms of 3G penetration. In recent years, the number of Americans accessing the Internet from their phones has grown significantly, as has the number of people performing Internet searches from their mobile phones. Mobile search was already important in 2008, when all U.S. carriers began offering flat-rate, unlimited mobile data packages. The United States represents 68% of the worldwide mobile searching, and with flat-rate data pricing, there is no disincentive to search when information is needed. It will be crucial for mobile marketers working in North America to learn how to leverage mobile search and mobile search engines.

Carrier decks and carrier search still play some role in shaping the Web activity of mobile users in the United States, but this trend is likely on its way out. The percent of U.S. on-deck traffic went from 53.4% in the fourth quarter of 2007 to 36.91% in the fourth quarter of 2008, but until recently, some carriers made it difficult or impossible for their subscribers to access content on the off-deck Web. Instead, they kept them on their deck, where they could potentially make money from partner advertising.

Despite the relatively advanced nature of the mobile landscape in the United States, not all mobile marketing will be well received. Americans have a deeper concern for privacy, which makes the idea of mobile marketing unappealing to many. The younger demographics are less likely to be offended by mobile marketing messages,

but to avoid ostracizing potential customers, you should keep your messages highly targeted and short. Mobile marketing is largely unregulated in the United States, but advertisers are expected to follow guidelines set forth by the Mobile Marketing Association (MMA).

There is a variety of legislation currently being debated in the United States that might soon create more clear guidelines and expectations for mobile marketers. The most notable is them is the m-SPAM act of 2009, which is actually an amendment to the CAN SPAM Act of 1993. While the CAN SPAM Act of 1993 set forth expectations for email marketing, the m-SPAM Act creates rules preventing unsolicited text messages, and outlining how text message marketing can be legally conducted in the United States.

It is usually best to gauge the tolerance and level of mobile engagement that your North American audience will have by launching first with a mobile call to action from a traditional marketing channel such as TV, radio, or print. When people opt in, you can better identify the people who will be most willing to accept marketing messages on their phone, so you can avoid simply sending a marketing message to everyone in your customer database. Despite privacy concerns, 32% of mobile data users reported that they would be willing to receive mobile advertising if it traded off with a lower cell phone bill or the capability to receive more rich content on their phone.

Similar to the cultural difference regarding privacy, North Americans have a slightly different take on sexuality in marketing. Although Americans have gotten a bad rap for the commoditization of sexuality, internationally (especially in Europe, Asia, and South America), sexually explicit marketing is less taboo. Sex sells anywhere, but if you are marketing sexually explicit content, initially you must be a bit more discrete and understated in North America.

Mobile Marketing in Europe

The adoption of mobile marketing in Europe has gone more quickly than it did in the United States, largely because of the prevalence of high-speed mobile infrastructure and the availability of high-quality handsets (see Figure 14.6). As revenue for mobile voice in Europe has begun to decline, carriers rely more heavily on mobile data and on text and picture messaging to make their business profitable. Mobile telecoms have begun to actively engage mobile advertisers and content providers as a means of monetizing their investment in 3G technology, so this should also help advance the channel.

3G penetration is the highest in Italy and Spain, both at around 38%. The United Kingdom lags behind, at about 28%, and Germany and France rank at 24% and 17% respectively. Despite having a higher penetration rate than the United States, the percentage using the mobile Internet is slightly less across the board. In Europe, the United Kingdom leads in mobile Internet use, with 13% of mobile subscribers accessing the mobile Web. Spain and Italy both come in with 11% and 12% of mobile subscribers accessing the Internet.

Mobile Advertising Spending in Western Europe, 2007-2012 (millions)

	2007	2008	2009	2010	2011	2012
Mobile message advertising	$1,050	$1,502	$2,233	$3,100	$3,821	$4,353
Mobile display advertising	$5	$17	$51	$101	$170	$229
Mobile search advertising	$18	$52	$141	$340	$614	$968
Total	**$1,074**	**$1,571**	**$2,424**	**$3,540**	**$4,605**	**$5,550**

Note: France, Germany, Italy, Spain, UK; numbers may not add up to total due to rounding
Source: eMarketer, March 2008

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Figure 14.6 *Mobile advertising spending in Western Europe. Chart courtesy of eMarketer.*

The launch of the iPhone has also done a lot to drive growth in mobile marketing in Europe but the handsets are still not widespread, and they represent only 2% of the total market in the United Kingdom (see Figure 14.7). Complicated roaming charges have stifled some mobile penetration but have mostly driven subscribers toward multiple SIMs and prepaid mobile access. European carriers were among the first to offer flat-rate data pricing, which is driving a large portion of mobile marketing dollars to the mobile Web. The United Kingdom is just behind the United States in terms of mobile search, representing 13% of off-deck mobile search worldwide, so mobile SEO will also be important in Europe. Location detection will likely be more important to the mobile search algorithms than it is in the United States because of the proximity of countries with different primary languages.

Mobile Content Used by iPhone, Smartphone and Mobile Phone Users in the UK, January 2009 (% of total)

	iPhone users	Total smart-phone users	Total mobile phone users
Accessed news/info via browser	79.7%	48.0%	19.8%
Accessed e-mail	75.4%	35.4%	13.1%
Listened to mobile music	65.6%	40.5%	22.6%
Accessed news or info via downloaded application	55.6%	22.1%	6.3%
Accessed weather	55.5%	26.1%	9.2%
Used Web search	55.1%	31.9%	12.3%
Accessed social networking site	54.8%	29.6%	12.7%

Note: based on three-month average for the period ending January 2009; ages 13+
Source: comScore Mobile as cited in press release, March 26, 2009

102709 www.eMarketer.com

Figure 14.7 *While iPhone users in the UK use their iPhones to access many media types, overall iPhone penetration has not increased at the same rate as in the U.S. Chart courtesy of eMarketer.*

Mobile music, especially ad-funded mobile music, is promising in Europe, expected to be worth $120 million by 2012 (see Figure 14.8). European marketers are skipping the middleman and are creating partnerships between carriers and labels—and even artists themselves—to provide subscribers with mobile music that they do not have to pay for. John de pre Gauntt, a senior analyst at eMarketer says:

> "Mobile works better as a marketing and customer relationship platform than it does as a retail sales platform. Bands and artists are increasingly using mobile to form direct relationships with their fans, which are then monetized through other means, such as tickets to live shows, merchandise, and fan clubs."

Mobile Music Spending in the EU-5, by Format, 2007-2012 (millions)

	2007	2008	2009	2010	2011	2012
Mastertones, ringback tones and other*	$166	$258	$368	$532	$639	$740
Full-track downloads	$101	$172	$267	$435	$567	$740
Total mobile music spending	**$267**	**$431**	**$635**	**$967**	**$1,206**	**$1,479**
of which: ad-supported mobile music	$5	$22	$41	$77	$139	$170

*Note: excludes monophonic and polyphonic ringtones; includes France, Germany, Italy, Spain, UK; *other includes music videos and streams*
Source: eMarketer, July 2008

095967 www.eMarketer.com

Figure 14.8 *Mobile music spending in Europe. Chart courtesy of eMarketer.*

In terms of mobile marketing, Europe is very advanced and receptive. Mobile advertising is especially important, with an expected $614 million spent on mobile advertising in 2010. In Spain, 75% of mobile phone owners receive ads, while 62% receive them in France. Mobile mapping, video, and social networking are also very popular in Europe, and access to this type of content is expected to grow dramatically. These will also provide great means for reaching your demographic with mobile marketing.

Working with Mobile Carriers, Service Providers, and MVNOs

When you are launching a mobile marketing campaign, it can be important to understand the lay of the land in terms of what companies you will be working with. A mobile service provider, also known as a mobile network operator or a mobile carrier, is the company that has the power to acquire radio spectrum licenses from the government. These companies power and maintain the mobile cell towers and, in many cases, sell or lease mobile handsets to their subscribers.

If it makes sense to run your campaign through a particular carrier, you will need to know which carriers are available to work with, and in many cases, who powers

their networks. Understanding who the service provider is can be more challenging than it sounds because service providers frequently operate under different names when they expand into new countries. Mergers, acquisitions, and joint ventures can also make this challenging.

Often service providers operate under their own name as well as other carrier brand names, called mobile virtual network operators (MVNOs). In this situation, a branded carrier leases network capacity from a mobile service provider and resells it under its own brand name. MVNOs can help carriers expand their network into new markets or reach new demographics without changing the strategy of their main brand. A good example of this is Boost Mobile, which was created as an MVNO of Nextel in the United States. The brand was targeted at urban youth and thus needed a much edgier appeal.

Carriers around the world follow different sets of regulations and advertising guidelines, so understanding how the different companies interact can help you assess which companies might be easiest to work with. If you are launching a campaign that you might later want to expand to other countries or regions, it can also help to understand which networks power various carriers internationally. Table 14.1 highlights the top carriers and service providers in different regions of the world.

Table 14.1 Major Carriers and Service Providers by Geographic Region

Africa
Etisalat
Globacom
MTN Group
Portugal Telecom
Safaricom
Telefónica
Telkom
Vivendi
Vodacom
Vodafone
Zain

Asia
Ayala Corporation
Celcom
DiGi
Grameen Telecom
KT Freetel
Maxis
New World Development
NTT DoCoMo
Orascom Telecom
Singapore Telecommunications
SK Telecom
Taiwan Mobile
Telekom Malaysia
Telenor
Telstra
True Corporation
Viettel Mobile
Vodafone

Australia
Optus Mobile
Telstra Mobile
Vodafone

Canada
Bell Mobility
Rogers Wireless
Telus Mobility

China
China Mobile (state owned)
China Telecom (state owned)
China Unicom (state owned)

Table 14.1 Continued

Europe
3
Cosmofon
Deutsche Telekom
France Télécom
O2
Orange
Telefónica
T-Mobile
Vodaphone

India
Airtel
BSNL (state owned)
Reliance
Vodafone

Japan
au
NTT DoCoMo
(50% state owned)
SoftBank Mobile

Middle East
Asia Cel
Avea
Cellcom
Free Float
Hamrah Aval
Mobilink
Mobility
MTN Irancell
Orange
Orange SA
Orascom Telecom
Saudi Telecom Company
Telecom Egypt
Telenor

New Zealand
NZ Communications
Telecom
Vodafone

South America
Portugal Telecom
América Móvil
bMobile
Claro
movistar
Telcel
Telefónica
Tigo

U.S.
AT&T
Cellular One
Cricket Communications
Sprint Nextel
T-Mobile
U.S. Cellular
Verizon
MetroPCS

15

Looking into the Future for Mobile

We are already living in a world where our sneakers can interface with our phones (Nike) and our treadmill can Tweet our workouts (Netpulse), but the future promises to be even more exciting. Mobile technology such as networks and handsets will continue to improve, as it always has, but what is more interesting for marketers is how the heightened level of mobility will affect the way our customers think and the way they make decisions. Mobile connectivity will continue to change how we access information and make human connections in the same way that the traditional Internet did a generation ago. This change will give marketers an unprecedented opportunity to reach and understand their target market. To embrace the future of mobile marketing, you must understand how mobile technology addresses basic human needs, especially in terms of the mobility of human connection and the mobility of information.

The Future of the Mobility of Human Connection

The capability to connect people in a convenient and seamless way is one of the most powerful functions mobile technology provides. In Maslow's Hierarchy of Needs, safety and human connection or love are identified as foundational needs that humans have (just after physical needs such as air, food, and water), and mobile technology will continue to improve our ability to meet these needs.

Calling, texting, sending picture messages and emails, and participating in social networks are all activities that help us stay connected with the people we care about. These kinds of social activities are sure to grow as mobility continues to become more deeply integrated into our society.

Mobile technology has changed the way people use social networks, causing the social networks to adapt to meet the needs of an ever-present, real-time audience rather than interaction based on a user's willingness to participate on the social networking site in a more limited way. Although it went largely unnoticed, the addition of "What are you doing now?" prompts on social networks signaled this transition—and this is exactly what Twitter capitalized on to make its mark in the world of social networking.

Making specific predictions on how social interaction and human connection will evolve in the mobile space is difficult, but it is clear that integration with input mechanisms will be crucial. The mobility of social interaction has actually changed some people's self-perceptions to include the desire or even need to "live-report" their lives. The ability to upload a picture to Facebook or a video to YouTube using only a mobile phone is quite revolutionary, but it has become so simple that many people, especially those who consider themselves live reporters, do it daily or more. Interestingly, their posts are not ignored, but they actually help others feel more connected to them, no matter how mundane the updates or information appears to be.

On the other hand, the real-time access to social interaction via mobile devices has changed some people's self-perception to include more of a "perpetual voyeur" mentality. Mobile connectivity allows them to keep up-to-date on their friends, family, and community without active involvement. In some cases, these people are constantly reviewing the status updates of others; in other cases, they simply know how and where to find information about people or groups they are connected with, whenever they need it. In a way, they are using information stored in social networks as a collective social memory, a touch point that allows them to see how their loved one's day is progressing, to remember what someone looks like, or to remind them of someone's name.

To successfully leverage this dependence on social mobile technology, marketers need to be clever and unobtrusive. Any kind of service that helps people feel safe and connected will provide immense value to a mobile audience, and these needs will continue to be primary factors in the growth and reliance on mobile technology.

The Future of the Mobility of Information

After safety and love, Maslow suggests that self-esteem and self-actualization complete the hierarchy of human needs. When people need information, they search for it, and as we move into the future, we will continue to see changes in the way searchers discover new content on the mobile Web. Although the link is not explicit, self-esteem and self-actualization are both deeply related to a person's ability to access and process information. Self-sufficiency, authenticity, creativity, and meaning are all partially derived from a person's access to information or knowledge.

In the modern world, when people need information, they search—and the most common and accessible method of search frequently involves using an Internet search engine. Mobility extends our access to the unlimited amount of information on the Web, making it an ever-present life tool. Although some mobile search technologies hope to rival the dominance of mobile search engines, those mobile search engines will indefinitely maintain their prominence as the top method of accessing mobile information. Our reliance on mobile search engines will have a dramatic impact on mobile marketing in the future. Savvy mobile marketers must understand the imminent evolution of mobile search engines and the growing ubiquity of mobile search.

The Imminent Evolution of Mobile Search

The algorithms that search engines use to determine relevance and rank results are constantly changing. An antagonistic symbiosis exists between search engines and Internet marketers. Search engines will always try to give searchers the best results, and Internet marketers will always try to manipulate the results to make their websites look like "the best" in the eyes of the algorithm. Unintentionally, Internet marketers have done a lot to improve the search engines, by creating the need for a better algorithm. Updates to the mobile search engine algorithm will continue to make mobile search results more portable, more personal, and more intelligent.

More Portable Results

Mobile search engines currently enable you to specify where you are, and they will tailor your result set based on that location, but the location still must be manually set. Automatic location detection will soon become seamlessly integrated into the mobile search algorithm. Location-based search (LBS) is still in its infancy, but this will change quickly. More mobile phones are equipped with GPS technology (or assisted GPS), and soon the searcher's exact coordinates will become part of the search algorithm.

Because your cellphone is always on, the algorithm might even include information about how long you have been in one location. Hypothetically, a GPS-enabled mobile phone should be able to tell that you spend most of your time between two or three locations, usually home and work. So when you perform a mobile search, the algorithm could assume that you are relatively familiar with the local landscape when you are in those locations, but would adapt when you are not. When you arrive in a new city, the phone would know that you have not been in that geographic location for long, and local information would reasonably be given more priority in your search results to help you find your way around.

More Personal Results

Traditional and mobile search engines already tailor search results based on a user's past searches and click-throughs if searchers are logged into their search engine account. If you have searched and found what you were looking for (meaning you didn't immediately hit the Back button in your browser), the search engines can determine that your search was successful, and in future searches, they can assign a higher rank to the site where you found what you were looking for with that search. Conversely, if you perform a search and click on the results, only to immediately hit the Back button when you land on the site, the search engine will understand that you didn't find what you were looking for and will not rank that site as well in subsequent searches.

- As the world of mobile search progresses, we can expect many changes that will provide a much higher level of personalization. Because many computers are shared among multiple users, search engines can show personalized results only to users who are logged in. Because there is such a low chance that a mobile phone is a shared device, the search engines will be able to tie a user's search history directly to his or her phone number, eliminating the need to log in.

- In that same vein, mobile phone numbers might gain status as unique identifiers, as IP addresses are currently used in the traditional online space, or as Social Security numbers and driver's license numbers in the off-line world. Technology will become ever slimmer and quicker, and a majority of processing and data storage will become virtual—not hosted on any one device, but hosted somewhere on the Web or in "the cloud." Everyone will have a unique set of digital content that is device independent and accessible from a number of types of devices. This will make us much less reliant on the actual devices we purchase and more reliant on the Web and Web search, even if only to search within our own set of digital content hosted in the cloud.

More Intelligent Results

In addition to knowing where we are and what our normal search behavior is, future mobile search engines will understand and interpret context, and use that to influence the order in which search results are displayed. The device doing the search will become a much more integral part of the algorithm. Different devices have different intended uses that the search engine can easily determine:

- A person searching for "american eagle" on a traditional computer might be doing research on a bird, but a person doing the same search on a GPS might be looking for an American Eagle clothing store.
- Someone searching for "big head" on an MP3 player is likely looking for music by Big Head Todd & the Monsters, but someone searching for "big head" on a game system is more likely looking for a common cheat code that makes all the video game characters' heads appear humorously large.

This type of evolution to the algorithm won't be valuable only to differentiate among different types of devices, but it can also provide a different set of search results for different product models within the same type of device. When a query is sent, the search engines can see not only that it is coming from a cellphone, but also what type of cellphone it is, to provide results that are specific to the demographic that is associated with the specific handset:

- A person searching for Diesel on a push-to-talk cellphone is likely looking for fuel, but the same search from an iPhone is more likely looking for a store that carries the popular Diesel brand merchandise.
- Someone searching from a BlackBerry might want a different set of search results for a search on the word "nightlife" than someone searching from a Razr or SideKick.

Mobile Search Is Ubiquitous Search

One of the most important points to understand about the future is that mobile search is not just going to happen on mobile phone handsets. Many new portable devices are becoming Web enabled and will offer mobile search as an integral part of the device. Your mobile site will have the opportunity to rank in a number of other devices:

- **Game systems**—Video game systems increasingly enable you to play against friends via the Internet, but they also let you buy and download new games or game features, which creates a need for search. These devices can be portable or can be set up to work with your TV.
- **GPS**—The days of downloading updated maps and business addresses to your GPS are limited. Tapping into local Web search APIs for up-to-date maps and business listings is a more scalable solution that makes the devices much slimmer and more user-friendly; in fact, the three major search engines have already been brokering deals with car and GPS manufacturers around the world. BMW and Mercedes have already offered a limited fleet of cars with Web-enabled GPS in Germany.
- **MP3 players and HD radio**—Some MP3 players are already equipped to search and download music and album artwork from the Internet, but these are generally within the walled garden of the manufacturer. In the future, these walled gardens will likely be forced to open up, and some form of Web search will be included in all MP3 players.
- **TV and IP-TV**—In many cases, we can already set up recordings on our DVR via the Internet (TiVo), so we are already engaged in a search when we are looking for the right program to record. Mandatory digitalization of TV broadcasts in 2009 has taken this trend a step further, making it easier for companies to distribute and search for TV broadcasts in a Web environment.

With all these technologies, opportunities will arise to create and tailor a marketing message. Marketing dollars will always play a huge role in the development of new Web-based technology because they mitigate the development cost of the technology. Whether through carrier agreements with mobile gaming systems, search engine agreements with IPTV companies, or traditional mobile search results that are shown on your GPS, the opportunity to promote your products will be available.

With the plethora of new mobile technologies, search engines and Internet marketers will have a wealth of new information available to them. Search engine algorithms will be updated to provide better results, and this will make mobile search results more portable, personal, and intelligent.

Conclusion

Mobile marketing is changing at a break-neck speed, and the opportunities continue to expand and evolve. As in all marketing media, there will be a constant struggle for balance between the presence of marketing messages and the tolerance your target market has for the intrusion. Marketing that is understated or infrequent will not return the desired return; similarly, marketing that is overbearing and intrusive will not generate the desired response. Your best bet to leverage the future of mobile marketing could lie in your ability to understand and capitalize on how mobile technology helps people address their most basic needs, rather than simply focusing only on the more technical or flashy aspects of the practice.

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A

Txtspk Definitions

Table A.1 provides some commonly used text speak (txtspk) and definitions.

Table A.1 Text Speak (txtspk) Definitions

Txtspk	Definition	Txtspk	Definition
:-(	Frown	AFK	Away from keyboard
:-)	Smile	AKA	Also known as
:(	Frown	Anom	Anonymous
:)	Smile	Apt	Apartment
)	Smile	Asap	As soon as possible
^5	High five	Atm	At the moment
8 (	Frown	Attn	Attention
8-(	Frown	Avg	Average
8-)	Smile	BB	Be Back
;)	Wink	Bbfn	Bye, bye for now
:D	Big smile	BBIAB	Be back in a bit
:x	Kiss	BBIAF	Be back in a few
:P	Bleh	Bbl	Be back later
QT	Cutey	Bbt	Be back tomorrow
>_<	Angry	Bc	Because
O_O	Stunned	B/C	Because
/W	With	B/f	Boyfriend
A/S/L	Age/sex/location	B/fs	Boyfriends
AFAIK	As far as I know	B/g	Background

Table A.1 Text Speak (txtspk) Definitions

Txtspk	Definition
B/gs	Backgrounds
Brb	Be right back
Brh	Be right here
Bro	Brother
Btw	By the way
Btdt	Been there done that
Bwl	Bursting with laughter
Bws	Big wide smile
Cmon	Come on
Congrat	Congratulations
Congrats	Congratulations
Cpu	CPU
C/W	Class work
Cul	See you later
Cwyl	Chat with you later
Cya	See ya
Degt	Don't even go there
Del	Delete
Dgt	Don't go there
Dif	Difference
Diff	Different
DL	Download
D/l	Download
D/ls	Downloads
D/ling	Downloading
Dl ing	Downloading
Dnk	Do not know
Dol	Dying of laughter
Drt	Dead right there
Dts	Don't think so
Ext	Extension
Exts	Extensions
Faq	Frequently asked questions
Fav	Favorite
Favs	Favorites
Fb	Funny business
Fcol	For crying out loud
Fgt	Feeling great today
Foc	Fell off chair
Focl	Fell off chair laughing
Foomcl	Falling out of my chair laughing
Ftbomh	From the bottom of my heart
Fwy	Freeway
Fwiw	For what it's worth
Gday	Good day
Gevening	Good evening
Gnight	Good night
G'Day	Good day

Txtspk	Definition
Gdr	Grinning, ducking, and running
G'Evening	Good evening
G'Night	Good night
G/f	Girlfriend
G/fs	Girlfriends
Gfi	Go for it
Gfn	Gone for now
GTG	Got to go
G2g	Got to go
Gtgb	Got to go bye
G2gb	Got to go bye
Gg	Gotta go
Giar	Give it a rest
Gj	Good job
Gdp	Good job, partner
Gmc	Getting more coffee
Gmta	Great minds think alike
Gtsy	Glad to see you
Habo	Have a better one
Hagn	Have a good night
Hago	Have a good one
Hak	Hug and kiss
Hatm	Howling at the moon
Hawu	Hello all, what's up?
Hb	Honey bear
Hciery	How can I ever repay you?
Hf	Have fun
Hhb	Hello, honey bunny
Hnd	Have a nice day
Hoas	Hold on a second
Hoamp	Hold on a minute, please
Hols	Holidays
Holi	Holidays
HQ	Headquarters
Hrs	Hours
Hry	How are you?
Hty	Hugs to you
Hwy	Highway
Iay	I adore you
Iayt	I adore you, too
Ib	I'm back
Icbw	It could be worse
Ic	I see
Iddi	I don't doubt it
Idk	I don't know
Idts	I don't think so
IIRC	If I recall correctly
IMHO	In my humble opinion
IMO	In my opinion
IMNSHO	In my not-so-humble opinion

Table A.1 Text Speak (txtspk) Definitions

Txtspk	Definition
IOW	In other words
IRL	In real life
Irmc	I rest my case
Irt	In real time
ISTM	It seems to me
Iw	It's worse
Iwmy	I will miss you
Iwywh	I wish you were here
Iyd	In your dreams
Iykwim	If you know what I mean
Iyo	In your opinion
Jacpm	Just a cotton-picking minute
Jas	Just a sec
Jja	Just joking around
JJ	Just joking
J/J	Just joking
J/K	Just kidding
JK	Just kidding
Jmho	Just my humble opinion
Jmo	Just my opinion
l8r	Later
latez	Later
lol	Laughing out loud
lmao	Laughing my a** off
lmc	Let me check
lmfao	Laughing my f****** a** off
lmho	Laughing my head off
lmtal	Let me take a look
loflol	Lying on the floor laughing out loud
lshict	Laughing so hard I can't type
lsligt	Laughing so hard I got tears
lshih	Laughing so hard it hurts
lshmbb	Laughing so hard my belly is bouncing
lshmbh	Laughing so hard my belly hurts
lshmch	Laughing so hard my cheeks hurt
lshmsh	Laughing so hard my sides hurt
ltm	Laughing to myself
LTNS	Long time, no see
lylab	Love you like a brother
lylas	Love you like a sister
Mia	Missing in action

Txtspk	Definition
Min	Minute
Msg	Message
Msgs	Messages
Mt	My time
Nb	Newbie
N00b	Newbie
Ncto	Now, cut that out
Ne1	Anyone
Ngt	Not going there
Nm	Never mind
N/m	Never mind
Nmh	Not much here
N/w	No worries
Np	No problem
N/p	No problem
Nrn	No response necessary
Nsd	Never say die
Nunya	None of your business
Nw	No way
Ohd	Oh, happy days
OIC	Oh, I see
OIl	Only laughing a little
Omg	Oh my God!
ootd	One of these days
OTOH	On the other hand
Otp	On the phone
Ottomh	Off the top of my head
Pic	Picture
Pics	Pictures
Pkg	Package
ppls	People's
ppl	People
pls	Please
plz	Please
Prob	Problem
Probs	Problems
Prolly	Probably
Rem	Remember
Rems	Remembers
ROFL	Rolling on floor, laughing
ROTFL	Rolling on the floor, laughing
ROTFLMAO	Rolling on the floor, laughing my a** off
ROTFLMFAO	Rolling on the floor, laughing my f****** a** off
RP	Role play
Rpg	Role-playing game
Sec	Second
Stfu	Shut the f*** up
Sthu	Shut the h*** up

Table A.1 Text Speak (txtspk) Definitions

Txtspk	Definition	Txtspk	Definition
Swl	Screaming with laughter	Vid	Video
Syl	See you later	VR	Virtual reality
Temp	Temporary	WB	Welcome back
Tnx	Thanks	W/e	Whatever
Thnks	Thanks	W/o	Without
Thx	Thanks	Wk	Week
Tanx	Thanks	Wks	Weeks
TX	Thanks	WTF	What the f***
TTFN	Ta, ta for now	WTG	Way to go
TTYL	Talk to you later	Yr	Your

B

List of Vendors, Products, and Services

The following pages include a reference of different companies within the mobile marketing space. Companies included in this list are not necessarily companies that I have worked with or expressly recommend. Instead, they are companies that are known for their skill in a particular area, or companies that I found in my research for the book. The goal is simply to give you a place to start when you are researching different types of vendors for a mobile marketing project.

Mobile VoIP and Audio

Product, Vendor or Service	URL
HelloSoft	www.hellosoft.com
Melodis Corporation	www.melodis.com

Mobile Testing and Tools

Product, Vendor, or Service	URL
DeviceAnywhere	www.deviceanywhere.com
MobiReady	www.mobiready.com
W3C Mobile Code Checker	www.validator.w3.org/mobile
dotMobi Emulator	www.mtld.mobi/emulator.php
WinWap Smartphone Emulator	www.winwap.com/downloads/downloads
OpenWave Browser	www.developer.openwave.com/dvl/tools_and_sdk/phone_simulator/choosing.htm
Nokia Browser Simulator	www.forum.nokia.com/info/sw.nokia.com/id/d57da811-c7cf-48c8-995f-feb3bea36d11/Nokia_Mobile_Internet_Toolkit_4.1.html
Microsoft Pocket PC Emulators	www.msdn.microsoft.com/en-us/windowsmobile/bb264327.aspx
Online Mobile Simulator	www.emulator.mtld.mobi/emulator.php
Online WAP Browser	www.wapsilon.com
BrowserCam	www.browsercam.com

Mobile Tracking

Product, Vendor, or Service	URL
Adversitement B.V.	www.adversitement.com
Carrier IQ	www.carrieriq.com
Fli Digital, Inc.	www.flidigital.com
HipCricket	www.hipcricket.com
Medio MobileNow	www.Medio.com
MobClix	www.mobclix.com
Mozes	www.mozes.com
Qrme	www.qrme.co.uk/

Mobile Ticketing, RFID, and NFC

Product, Vendor, or Service	URL
AURA Interactive (Australia)	www.aura.net.au
CellTrust	www.celltrust.com
Qwasi	www.qwasi.com
TagIt	www.tagit.tv

Mobile Ad Design

Product, Vendor, or Service	URL
AditOn	www.aditon.com
Bluestar Mobile Group	www.bluestarmobile.com
Graphico New Media	www.graphico.co.uk
Medialets, Inc.	www.medialets.com
Wapple	www.wapple.net

Mobile eCommerce

Product, Vendor, or Service	URL
AirTight Networks	www.airtightnetworks.com
Bango	www.bango.com
CellTrust	www.celltrust.com
MCN, Inc.	www.mcn-inc.com
Mobile IQ, Ltd.	www.mobileiq.com
Mobile Media Production	www.mobilemediaproduction.com
Qwasi	www.qwasi.com
TagIt	www.tagit.tv

Mobile Video

Product, Vendor, or Service	URL
Amobee	www.amobee.com
Compera nTime (Brazil)	www.comperantime.com

Mobile Strategy Consulting

Product, Vendor, or Service	URL
Rank-Mobile	www.Rank-Mobile.com
Trend Mobility	www.trendmobility.com
ComperamTime	www.comperantime.com
iCrossing	www.icrossing.com

Mobile Industry News

Product, Vendor, or Service	URL
M:Metrics/ComScore	www.mmetrics.com
MediaPost	www.mediapost.com
MMA Mobile Marketing Forum	www.mobilemarketingforum.com
MobiAdNews	www.mobiadnews.com
Mobile Marketer	www.mobilemarketer.com
Mobile Tech News	www.mobiletechnews.com
Mobile Tech Today	www.mobile-tech-today.com
MobileBurn	www.mobile-tech-today.com
Mobile Marketing Magazine	www.mobilemarketingmagazine.co.uk
Mobile Technology Web Blog	www.mobile-weblog.com
Moco News	www.moconews.net
Nielson Mobile	www.en-us.nielsen.com/tab/industries/telecom
PC Magazine	www.pcmag.com
RCR Wireless	www.rcrwireless.com
Search Engine Land	www.searchengineland.com
Search Engine Watch	www.searchenginewatch.com
SearchEngineJournal	www.searchenginejournal.com
SearchMobileComputing	www.searchmobilecomputing.techtarget.com
SmartPhone Magazine	www.smartphonemag.com
Wireless Week	www.wirelessweek.com
PhoneScoop	www.phonescoop.com
Windows Mobile	www.windowsteamblog.com
Textually	www.textually.org

Product, Vendor, or Service	URL
SMSText News	www.smstextnews.com
Mobile Marketing Watch	www.mobilemarketingwatch.com/
Mobile Marketing Profits	www.mobilemarketingprofits.com
2D Code	www.2d-code.co.uk
GoMo News	www.gomonews.com
BeeTagg	www.beetagg.com
PC World	www.pcworld.com
MobiForge	www.mobiforge.com

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Glossary

A

alternative input search Search engine queries that are not based on direct entry of text into a Web search engine. Mobile phones have more options for inputting a search, such as voice, picture, and text messaging.

Amended Telemarketing Sales Rule (ASTR) *See* Telemarketing Sales Rule (TSR).

Aztec Codes *See* QR Codes.

B

Bluetooth Technology that uses radio broadcast to allow multiple proximal devices to recognize each other and send information between them wirelessly.

branded profiles A profile on a social network that is a representation of your brand and a means of communicating with your customers. Many social networks allow companies to represent their brand and participate in the social network under a brand name, but if they don't, you can create a profile based on a company mascot, a figurehead, or sometimes a CEO.

C

CAN-SPAM Act passed in 2003 to restrict commercial email by ensuring that mechanisms for opting out or contacting the sender directly are included. This law covers email on the traditional computer and on the mobile phone, but it does not cover text messaging or other types of mobile messaging. It would be possible to add a Do Not Email Registry under this law, but the FTC determined that it would be too difficult to verify email account information and, thus, was not feasible.

carrier groups In some cases it may be a good idea to segment your advertising campaign by carrier. This happens naturally if you are advertising on a carrier deck, but it can also be valuable for off-deck mobile advertising.

Cascading Style Sheets Cascading Style Sheets are the rendering instructions that control how the content of your site is rendered. When a page is rendered, the browsers pull the style sheet to see how the page should be laid out and what fonts and colors to use when rendering it.

Children's Online Protection Act (COPA) Legislation that prevents companies from collecting or storing information about people younger than 13 years old. This is important for mobile marketing because many contests, sweepstakes, and other participatory initiatives might be targeted at people in that protected age group.

Clearwire A brand-name wireless Internet service provider (ISP) that operates in the United States, Ireland, Belgium, Spain, Denmark, and Mexico. It provides a unique wireless network that uses WiMax technology with 3G technology to provide 4G wireless network access.

click A statistic that describes how many time users actually clicked on your advertisement. This is a measure or engagement rather than exposure.

code division multiple access (CDMA) Subset of 2G technologies that relies on each phone being assigned a specific code, allowing multiple users to be put on the same transmission channel. Used in North and South America as well as Asia, CDMA still accounts for 17% of subscribers in the world.

compensation Element that represents winnings. In a lottery, it would be the payout for a winning ticket. If you are running a mobile sweepstakes, you can consider offering prizes that have no monetary value, such as having the winner's names listed on a leader board. However, if the prize is a cash prize, it will be impossible to remove this element from your legal concerns, and you will need to look closely at the laws that govern cash prize payouts.

consideration Element that is the payment to participate. In a lottery, it would be the cost of the lottery ticket. If you are running a mobile sweepstakes, the best thing you can do to eliminate consideration is to make it free to participate in the contest. Premium text messaging services charge money, so it is a good idea to allow users to participate for free online as well.

contextual mobile ads Contextual mobile ads can be in the form of text or images and are displayed on a mobile website rather than in mobile search results. In this model, mobile site owners consent for relevant advertisements to be shown on their website in return for a portion of the profits that the ad network receives from those particular ads. The mobile ad network offers advertising opportunities through a bidding model that combines the advertisers' willingness to pay for position with the relevance of the ad to the content of the website it is being displayed on.

conversion and acquisition Whenever a visitor to your mobile content takes an action that you want, such as buying something, downloading something, or signing up for something, that is a conversion and the visitor has said to have converted. If a visitor signs up for alerts or emails, or in some way indicates that he or she would like to receive messages from you in the future, that is considered a customer acquisition, frequently just called an acquisition.

cost per conversion (CPC) or cost per acquisition (CPA) Ratios that measure the number of conversions or customer acquisitions that you received as a result of the advertising campaign, compared to the amount that you spend to place an advertisement. These are important statistics for understanding how much each you are spending on each conversion or acquisition. These statistics can be figured individually, for each conversion event, or aggregated, for all the possible conversions in the campaign.

cost per pair of feet (CPPoF) The amount of money spent in marketing to drive each individual person into a brick and mortar store. The total cost of marketing divided by the number of visitors to a store over a specific time period.

cost per thousand (CPM) (Also effective cost per thousand [eCPM].) Business model in which advertisers pay a certain price for an advertisement to be shown a thousand times or to have a thousand impressions. The *M* in *CPM* represents a thousand in Roman numeral form.

coupon applications Applications dedicated to helping people save money. In some cases, that means coupons. People who download coupon applications and sign up with their services can receive coupons directly from the mobile application or through SMS, MMS, or email.

customer relationship management (CRM) A computer database that stores information about individual customers. This information can include contact information, demographic information, and purchase behavior. The CRM is used to learn about customers and create marketing and customer service offerings that more closely meet their needs.

CSS *See* Cascading Style Sheets.

CTR Click-through rate. A relative measure of engagement based on the number of clicks per impression. A high CTR is valuable because it indicates that viewers are finding your advertisement compelling.

D

Day-parting *See* Time Segmentation.

demographic segmentation Grouping and targeting ad campaigns based on known demographic information like age, gender, income, or location.

direct marketing The use of personal mass media as a marketing tool to elicit a direct response from the target market or people receiving the advertisements. It can include post mail, telemarketing, direct email, point of sale advertising, and online marketing. Direct marketing always has a measurable response so that effectiveness of the campaign can be determined and evaluated.

Direct Marketing Association (DMA) An international organization based in the United States that helps develop and guide direct marketing best practices. Although the DMA's focus is not exclusively mobile, it is quite interested in the development of and adherence to privacy-related standards in the mobile marketing industry.

Do Not Call Registry (DNC) A list, created in 2003, of residences and phone numbers for individuals who prefer not to receive telemarketing calls. It is illegal for solicitors to call these phone numbers, although business lines cannot be added to the registry.

dotMobi (Also .mobi.) Top-level domain created to indicate that a website was developed specifically for mobile access. dotMobi domain names were first made available for purchase in 1996, designed to help distinguish mobile websites from traditional websites. They are not required, and frequently not desirable for mobile Web marketing, except in Asia.

E

effective cost per thousand (eCPM) A representation of your estimated earnings for every thousand impressions of an advertisement. A means of comparing revenue across different advertising channels. *See* cost per thousand (CPM).

enhanced data rates for GSM evolution (EDGE) A common 2.75G wireless network technology which improved the digital transmission speed of GDM and GPRS by 3x.

F

Federal Communications Commission (FCC) An independent U.S. government agency, directly responsible to Congress, that regulates interstate and international communications by radio, television, wire, satellite, and cable. The FCC will control what information about mobile customers can be shared and how, but the guidelines have yet to be passed. The FCC also regulates VoIP and phone number porting, which could both affect a mobile marketing campaign.

Federal Trade Commission (FTC) Organization that, with state attorneys general, is in place to curb unfair and deceptive trade practices. Some of the laws and regulations the FTC passes apply to mobile marketing campaigns.

FemtoCell Technology used indoors to boost indoor mobile handset signals by converting a wired broadband signal into a radio signal that can be picked up by mobile phones.

full Web transactions As on the traditional Web, entire transactions can be completed on the mobile Web without the need for an account or prepayment. Customers simply enter their credit card information, just as they would on the traditional Web. This is most commonly used by websites that offer some kind of online shopping experience.

G

Generated Packet Radio Service (GPRS) The first improvement in mobile data transmission. GPRS achieves moderate improvements in the transmission of data by using TDMA to improve packet switching over the mobile network. Like many other technologies, after its initial deployment GPRS technology was later integrated into GSM. GPRS can be added to 2G, GSM, or 3G networks.

Global System for Mobile Communications (GSM) A system developed to address some of the shortfalls of TDMA technology. It was originally created in Finland in 1991 but is now used around the world. It requires timing advance commands to be sent to the base station, which, in turn, sends signals to the mobile phone, telling it whether it should transmit the signal earlier and by how much.

Goog411 Service that text-messages your search results to you after you speak your query via phone.

Google Voice Application that takes voice queries directly from an iPhone without having to call and returns live Web results to the iPhone within the application.

Groupe Speciale Mobile (GSMA) An organization formed in 1982 by the Confederation of European Posts and Telecommunications (CEPT) to design a European mobile technology. Over time, GSMA has evolved to become the worldwide authority on mobile communication. Its mission is to "create value for operators and the mobile industry in the provision of services for the benefit of end users, so that those users can readily and affordably connect to and use the services they desire, anywhere, anytime."

H

handset groups Groups of mobile handsets that have similar attributes like screen size, operating system or browser. Addressing groups of handsets rather than specific handsets can expedite the launch of any mobile marketing campaign or application deployment.

I

idle screen advertising Mobile advertisements that are served while the user is waiting on a page or application to download or some other process to finish.

image Search results Images that appear in regular search engine results, or image-specific search engines. All of the top search engines have indexes for cataloging images from the Web. To rank well in these search results, use alternative text, otherwise known as alt tags, to describe all your images and include the top keywords for each page. Also use keywords when naming your files, to ensure that the search engines understand what the image represents and can index the site appropriately.

impression One instance of an advertisement shown online. The number of impressions can help evaluate the branding effect an advertisement might have, but it is a measure of exposure rather than engagement.

infrared (IR) One of the oldest and most limited forms of broadcasting mobile messages. Some laptops and phones are equipped with infrared technology, but it has not been universally adopted by handset manufacturers. These limitations make it less desirable than other more universally accepted technologies available.

Integrated Digital Enhanced Network (iDEN) A digital wireless standard developed by Motorola. It provides push-to-talk functionality like a walkie-talkie. The technology is used widely in the United States by Nextel.

Internet service provider (ISP) An IP network designed to move data rather than voice communication. ISPs can replace mobile technologies such as GSM and CDMA or can simply be added to networks with GSM and DSMA to increase their capacity.

J

J2ME Also known a Java Platform, Microsoft Edition or Java ME – this is a mobile application programming language that is commonly used for mobile game development.

L

local search results Search results that feature business personal listings with addresses and other contact information. These can be included in regular search listings or local-specific search engines. Search results ranked based on traditional ranking factors as well as their proximity to searchers location or, in some cases, the city center. As geolocation factors become more closely integrated with mobile search, the actual area code of the phone doing the searching might even be integrated when other methods of geolocation are unavailable. Local results are also heavily weighted on star rankings, so reviews and comments from satisfied customers are important.

localization Some search engines adjust search results based on the location of the searcher, so someone searching in New York will get different results than someone searching in Los Angeles. More dramatically, someone searching in Houston might get different results than someone searching from London, even if they are both searching from Google.com. This means that, again, just because you are ranking well in one place does not necessarily mean that you are ranking well in another place.

location-based Marketing Marketing messages that are sent or received by users based on their physical location. These include digital signage, Bluetooth, WiFi, near-field, and infrared broadcasts.

location segmentation Ad networks allow you to segment your ads based on the location of the recipient. This can be commonly be done by zip code, city, metro area, state, or even country. Segments are created in order to target advertising more effectively, measure advertising more effectively or both.

long-term evolution (LTE) IP data network that optimizes the transmission of data packets (rather than voice). It is expected to be deployed in 2010 but competes with WiMax as the 4G standard of choice for network operators.

Loyalty Marketing Marketing designed to add long-term value and brand affinity with existing or frequent customers. Common tactics are loyalty programs like punch cards, frequent shopper programs, or VIP clubs. These incentives encourage repeat purchases, and higher purchase values.

M

.mobi *See* dotMobi.

macropayments Used for purchases that cannot be billed as a micropayment, usually for goods or services over $5.

malware Any malicious software, including viruses, trojans, worms, and spyware.

micropayments Small transactions that can be completed on a phone and, in many cases, billed directly to a user's cellphone bill or credit card.

microsite Term used to describe websites that are created to achieve a very specific goal that represents only a small portion of the company or brand's overall marketing goals.

MMA Mobile Privacy Code of Conduct Code of conduct launched in 2003 by the Mobile Marketing Association Privacy Advisory Committee that covers six basic privacy concerns for mobile marketers: choice, control, customization, consideration, constraint, and confidentiality.

MMS Multimedia Message Service. An extension of the SMS messaging standard, but uses the WAP coding language to display multimedia content.

M-SPAM A bill that is currently being proposed in the U.S. Senate to criminalize mobile SMS spamming in the same way that CAN-SPAM criminalized email spam. As currently proposed, the act would empower the FTC and the FCC to curb unwanted text messages in the United States.

mobile affiliate marketing Unique form of marketing in which other companies agree to help you sell your product or drive traffic to your website, in return for a portion of the profits from each sale they send.

mobile applications Small programs that can be downloaded and added to a mobile phone to customize it for the users specific needs and wants. The major categories of mobile applications are games, entertainment, references, and productivity tools.

mobile banking Using a mobile phone to complete a banking transaction. In some cases, this is a reference to pseudo-economies built on the exchange and transmission of mobile airtime minutes for cash. Minutes are transmitted and exchanged between people or even to businesses as a means of currency, and a replacement for cash. These practices are most common in Africa and Asia.

mobile directory submission Directories are utility websites designed to help people find websites that are relevant to specific topics. They are organized in much the same way that a Yellow Pages book might be organized, dividing subjects by categories and subcategories. Within each category and subcategory are links to websites with more information on the topic.

mobile display Advertising Graphics put on a page that consumers can click on, linked to a specific offer, or full-page advertisement. As with traditional banners, these are usually sold on a cost per thousand impressions (CPM) basis. Mobile site owners agree to show your advertisement on their site in return for payment from the mobile ad network. Mobile display ads can also be included in games and downloadable mobile applications for additional targeted exposure.

mobile email Email that is rendered on a mobile phone. This is frequently the same emails that can be displayed on a traditional computer, though it is common in Asia for people to have email addresses that incorporate their phone number and are specifically designated to deliver to a mobile phone. Mobile email programs frequently have difficulty displaying HTML formatted marketing emails effectively but there are tactics for improving the effectiveness of traditional emails on mobile phones.

mobile landing page The mobile page user are automatically sent to when clicking on a mobile advertisement.

Mobile Marketing Association (MMA) An international group of mobile carriers, content providers, marketers, and other interested parties who help establish the best practices in the industry. Although none of its privacy guidelines are binding or enforceable, the MMA is frequently referenced as the accepted standards when clear laws are not present. The MMA frequently publishes and updates mobile marketing best practice documentation, as well as industry reviews and articles.

mobile network operator (MNO) A company that has frequency allocations and the entire required infrastructure to run an independent mobile network.

mobile payment The ability to pay for some goods or services with your mobile phone. Mobile payments can take place over the Web or can be completed offline through contactless payment options such as near field communication (NFC) and radio frequency identification (RFID).

mobile pay-per–click advertising *See* pay-per-click (PPC).

Mobile Robots.txt A search engine directive that tells mobile search engines which content they should crawl and index and which content they should not crawl. In some cases, mobile search engine crawlers may be blocked from crawling traditional websites, and traditional website crawlers may be blocked from crawling mobile Web content.

mobile search engine marketing (SEM) A comprehensive term that describes any type of marketing that is sold by search engines and displayed in search results. It is usually a specific reference to advertising and placement that is paid for, but in some cases the term is used to describe all the wider aspects of search engine marketing including search engine optimization and website usability.

mobile search engine optimization (SEO) Activity designed to improve the algorithmic search engine rankings of a website in mobile searches. Mobile SEO can be used to encourage mobile rankings for traditional websites (usually for rankings on smart phones) or mobile websites. Mobile SEO is not specifically a reference to optimization of '.mobi' domains or WAP websites. It is also an important marketing tactic for websites built in HTML and XHTML.

mobile search engine submissions The act of requesting listings in a mobile search engine by providing the search engine mobile urls that should be included in their search results. Submission pages that allow other sites to request inclusion in mobile search results. This used to be a powerful strategy in traditional SEO efforts, but it has become less effective there. Luckily, it is still a good idea for mobile SEO because the mobile search engines are looking for valuable mobile-friendly content to index and rank.

mobile service provider Also known as a mobile network operator or a mobile carrier. The company that has the power to acquire radio spectrum licenses from the government. Mobile service providers power and maintain the mobile cell towers; in many cases, these are also the companies that sell or lease mobile handsets to their subscribers.

mobile site map A list of website urls that you explicitly request the search engines to rank in search results. Google allows webmasters to submit multiple mobile site maps based on the markup language that website is built in.

mobile social gaming A type of mobile social network that is popular in Asian countries. Much like Second Life for the cell phone, this type of social networking allows users to create avatars, or visual representations of themselves. Those avatars interact with other avatars within the social network. In some mobile social gaming networks, these avatars behave just as you would actually behave, but other networks have little relationship to reality and instead act more like an online role-playing game.

mobile social networks Social networking is a term used to describe the activity of locating and interacting with other people who have similar interests. This activity is one of the fastest growing uses of mobile technology word wide.

mobile spamming Untargeted or unrequested digital marketing communication. The term was originally used to describe untargeted email marketing, but the definition has expended to include all types of marketing communication that recipients have not consciously opted into.

mobile subdirectory A sub folder or division of a website that is specifically created for mobile content. It is generally represented as www.example.com/m or www.example.com/mobile.

mobile subdomain A sub section of a website that is controlled from the server rather than in the file structure. It is generally represented as m.example.com or mobile.example.com.

mobile virtual network operators (MNVOs) Branded carriers that lease network capacity from a mobile service provider and resell it under their own brand names. MNVOs provide mobile phone service but do not have their own license or the infrastructure required to provide mobile telephone service. Good examples of MNVOs are Boost Wireless, Cricket Wireless as well as the Disney and ESPN specific carriers that failed.

mobile Web portal An entry page that provides immediate access to information and news without them having to search for it or go to multiple websites. Portals commonly bring in news, weather, and information from other sites, to aggregate it and make it easily accessible for their users.

N

near-field communication (NFC) Technology that relies on high-frequency messages to be sent and received from two enabled devices, sending its own signal but also sometimes working with RFID.

news search results Search results that are specifically designated as news either in regular search results or news-specific search engines. If your website frequently distributes news articles or press releases, it is important to be ranked in news search results.

O

off-deck The Web-at-large when accessed through a mobile browser. Off-deck content is not controlled by the carriers, though in some cases it can be blocked or slowed by carrier proxies.

on-deck Web content that is provided by the carrier though a branded portal, sometimes called a carrier WAP deck.

P

pay-per-click (PPC) A business model in which advertisers are charged for an advertisement only when someone actually clicks on it. Frequently search engines provide ad networks, and ads are usually shown alongside search results in a search engine.

personalization A search engine (especially Google) may use your previous search behavior to modify the search results it presents to you. If you have clicked on one listing frequently, the search engine may move it to the top of search results when you are searching for it; if you have never clicked on a result that ranks well, it may move it lower in the results.

PPC advertising *See* pay-per-click (PPC).

prompted payment A credit card on file with a specific company is charged for a recurring service after an SMS prompt is responded to by the recipient, giving permission for the charge. As an example, the carrier might send a text message to subscribers at the end of a billing cycle, notifying them of the total amount due and allowing them to respond with a preset PIN number to pay the bill with the credit card on file.

Q

QR Codes Also known as Quick Response Codes, these are small square dot matrix bar codes that can be captured by a camera phone then decoded by software on the phone to execute a specific task, like opening a website, placing a call, transmitting a vCard or sending a text message. These are also sometimes called Aztec Codes or 2D Bar Codes.

R

radio frequency identification (RFID) Technology that allows items to be "tagged" or tracked using radio waves. Some phones are equipped with RFID technology that can activate messages in offline mobile marketing like billboards and signs.

ROI (return on investment) A measurement that incorporates all the costs associated with running the advertising campaign, including agency management fees, design fees, and the cost of the time the staff has spent managing the campaign. ROI is the success metric for mobile advertising because it allows advertisers to show that, for each dollar they spend on advertising, they are making more than a dollar back in value or return. ROI = (Gain from investment – Cost of investment) / Cost of investment.

S

SDK An abbreviation for Software Development Kit. This is a tool set meant to help developers build applications for specific phones or operating systems.

short code A five- or six-digit phone number that can be dialed as a destination for a text message. These must be registered and leased, much like a domain name.

SMS (Short Message Service) Messages that can be sent from phone to phone or from computer to phone, or that can be sent from a phone to a common short code (usually abbreviated to simply *short code*).

social CPM marketing Many social networks make money almost exclusively through the sale of advertising on their sites. Although this business model has not yet proven itself to be enough to keep all the social networks alive, you can be sure that it will always be a key element in the social network business model. The simplest way for a marketer to reach out to potential customers on a mobile social networking site is to purchase ad placement within a cost per million (CPM) model. This is similar to other mobile CPM advertising, but marketers work directly with the social networking company or their ad network to place and track the ads.

spyware Software that runs in the background of an operating system to collect and send private information about a mobile user's behavior to an unauthorized party. Information, including private call logs, text messages, and picture messages, can be distributed to a third party.

T

Telemarketing Sales Rule (TSR) Bill established by the FTC in 1995, but significantly amended in 2004; it then became the Amended Telemarketing Sales Rule (ATSR). The bill's most important accomplishment was to establish the National Do Not Call Registry. It is important to note that the rules established in this act cover all acts of telemarketing, whether the telemarketer initiates the conversation or the customer initiates the conversation. This can come into play if you are using mobile marketing to drive phone calls to complete sales or make customer acquisitions.

Telephone Consumer Protection Act (TCPA) Act passed by Congress in 1991 that restricts the use of automatic dialing systems, artificial or prerecorded voice messages, SMS text messages received by cellphones, and the use of fax machines to send unsolicited advertisements.

text messaging Otherwise known as Short Message Service (SMS). This is the act of sending a short 160 character message between phones using a short code or a traditional phone number.

time division multiplex access (TDMA) An older method of wireless data transmission that is used to send digital signals that are divided into different time slots, rather than by codes in as in CDMA.

time segmentation Segmenting your advertisements by time of day, otherwise known as "dayparting." This segmentation can be especially powerful for mobile advertising because it allows you to reach people when you can safely anticipate their needs, like sending a mobile coupon for food at or just before noon.

Trojan Otherwise known as a Trojan horse. A program that purports to be something the user would want to download but actually harbors malicious code or viruses. In the mobile world, Trojans are usually purported to be wallpapers, ringtones, or applications.

Two-Dimensional (2D) Bar Codes *See* QR Codes.

U

ultra-wideband (UWB) Communication that uses a large portion of the radio spectrum to transmit broadband communication at a short range, requiring little radio energy. Ultra-wide-band transmissions can share a variety of different narrow-band radio signals without interfering with those transmissions. The uses of UWB are similar to those of Bluetooth technology, but UWB is less widely adopted.

unlicensed mobile access (UMA) Similar to FemtoCell, UMA is deployed through a base station that uses WiFi signals to carry voice and data from mobile handsets to a base station. The base station provides improved access to GSM and GPRS by tapping into unlicensed aspects of the network spectrum. In the United States, this is being promoted by T-Mobile; in the United Kingdom, it is being promoted by British Telecom.

V

video Search results When search results include videos either in regular search results or in video-specific search results like on YouTube. To be listed well in video search results, you must have videos on your website. Submitting videos and using a video site map helps search engines find and index the videos on your mobile website more efficiently. The video file types that can be included in your Google video site map are `.mpg`, `.mpeg`, `.mp4`, `.mov`, `.wmv`, `.asf`, `.avi`, `.ra`, `.ram`, `.rm`, and `flv`, but the most common mobile video formats are `.3pg` and `.mp4` . Flash (`.flv`) video files frequently do not work, so try to save your videos as `.mp4` or `.3pg` if you want them to rank well in mobile results.

virus Code that infiltrates a host operating system with malicious intent, in some cases, replicating within the system to cause a crash or render the system useless.

VoIP (Voice over Internet Protocol) A means of using a broadband internet signal to transmit voice, that can be pushed through a traditional phone handset, or conveyed with audio and video over computer programs like Skype.

W

WAP deck A mobile website or portal built in Wireless Markup language for use as part of the Wireless Protocol. WAP decks focus on text and have minimal design or display features.

white label search engine A search engine that can be leased and re-branded by companies who want to provide their users a search function. It is common for mobile carriers to use white label search engines to provide a search feature on their WAP decks or mobile portals. Users are generally unaware that the search engine is not actually owned or created by the brand name company that is displaying the results.

WiFi A wireless local area network that uses high-frequency radio signals to transmit and receive data. WiFi is a trademark of the WiFi Alliance for certified products based on the IEEE 802.11 standards.

WiMax Worldwide Interoperability for Microwave Access, a telecommunications technology that provides wireless transmission of data using a variety of transmission modes. The technology provides broadband speeds without the need for cables.

Wireless Action Protocol (WAP) A mobile development protocol that is expressed in a markup language called WML or wireless markup language. Many older mobile sites are built in this protocol, and are usually designed for feature phones or mobile phones with text only browsers. 'WAP' deck is a reference to a website built for WAP.

wireless local area network (WLAN) Internet access that is broadcast from wireless access points, otherwise known as wireless routers or hotspots.

World Wide Web Consortium (W3C) A nonprofit organization that creates specifications, guidelines, software, and tools to aid in the development of a better Internet and "lead the Web to its full potential." The W3C has developed a variety of standards for coding languages, including mobile-compliant XHTML and WML.

worm Self-replicating virus code that automatically spreads itself across a network, usually taking advantage of a user's contacts or address book on an infected device. Worms can also spread via Bluetooth or WiFi, and they do not work from the operating system. Worms are harmful to wireless networks, consuming inordinate amounts of bandwidth Worms can spread without any human interaction on the phone.

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