Chapter 12

How to Play Well in the Mobile Ecosystem

With your Mobile Web site deployed to the public Internet, an important and ongoing consideration is good citizenship in the mobile ecosystem. The mobile ecosystem is the collection of industry players who control subscriber access to the Mobile Web, provide web-based services for mobile subscribers, and shape user behavior on the mobile Internet. Mobile network operators, Mobile Web developers, OEMs, mobile software companies, and infrastructure providers (including transcoder vendors) are all examples of players in the mobile ecosystem. You are also a citizen in the mobile ecosystem. Given the explosive pace of Mobile Web expansion, a single savvy Mobile Web developer can influence the industry, so do not underestimate your ability to make a difference.

In a nutshell, this chapter is about identifying and resolving the ecosystem challenges that affect whether and how mobile users can access your Mobile Web site. Even a standards-compliant and publicly available Mobile Web site can lose users due to ecosystem interference, so it is critical for developers to vigilantly advocate for open access to the Mobile Internet.

Operators, Transcoders, and Proxies, Oh My!

The challenges that mobile subscribers face in gaining unrestricted access to the Mobile Web are of particular concern to Mobile Web developers. Mobile user access to your Mobile Web site can be disrupted in many ways. Discoverability is a challenge. Mobile Web sites may be deployed and available, but subscribers may not know how to find them, especially for long-tail sites or sites whose domain names differ from their desktop Web equivalents. Mobile users may make mistakes or grow frustrated when typing a long URL into the mobile browser. A user may search using a mobile search engine, but fail to find your Mobile Web site due to crawling problems or a poor search experience. Also possible, but less likely in today’s mobile ecosystem, is for a mobile operator to block access to your Mobile Web site using a blacklist. More likely, a mobile operator
deployes a transcoding proxy through which all Mobile Web traffic flows, and this transcoder reformats your markup to provide an “optimized” view of your site to the user. The “optimized” view may or may not be an improvement for your mobile users.

Just a few years ago, it was more common for operators to gate access to the public Internet using whitelists and blacklists of allowed and restricted domains. This measure was intended to ensure a safe and adequate user experience for early adopter subscribers tiptoeing onto the early Mobile Web. Operators also attempted to steer Mobile Web traffic to preferred partner sites. Today, such restrictive measures seem draconian. Open access to the Internet is the norm for most mobile operators. However, occasionally blacklists are discovered to be in use and almost always, it is up to the Mobile Web developer to advocate for the removal of their domains from the blacklist.

Procedures for petitioning to modify a blacklist vary widely among mobile network operators. Mobile Web developers should start by contacting the operator through business development channels or using the operator’s developer or partner program. (See Table 10-3 in Chapter 10 for a list of developer programs for US and European mobile operators.)

A more common way that mobile subscribers might be impeded in accessing your Mobile Web site, assuming the subscriber knows your site’s URL and enters it correctly into the browser, is interference from a transcoding proxy server, known simply as a transcoder. A transcoder is a proxy server deployed by an operator (or a mobile portal or search engine) that intercepts web requests from mobile devices, modifies HTTP request headers, and transforms the markup in the web response to ensure syntactic compatibility with the mobile device. Here, the term “transform” is a euphemism for machine modification of your site’s web markup.

In reality, a transcoder has an impossible directive. The purpose of transcoders is to bring the rich Desktop Web to mobile browsers and broaden the featurephone handset catalog that is capable of browsing the Desktop Web. Transcoders ensure that Desktop Web markup is syntactically compatible with limited mobile browsers, preventing the browser crashes and power cycling seen when desktop markup is fed unmodified into these browsers.

Machine adaptation of desktop-optimized markup for mobile browsers almost never results in an adequate user experience. Transcoded web pages may be unlikely to crash a finicky mobile browser, but the resulting user experience may also be crippled and frustrating. Content from the transcoded web page is spread across several Mobile Web pages, requiring multiple clicks and network round-trips to view the original page in its entirety. Forms and other interactive features of the original web page may also be disabled or broken.

Mobile operators tout the benefits of transcoders, including increasing subscriber access to the Web. Here are two excerpts from Verizon Wireless introducing its transcoding service:

[The transcoder] … will optimize the format of a web site so that it is quick to render on the mobile device and easy for subscribers to view