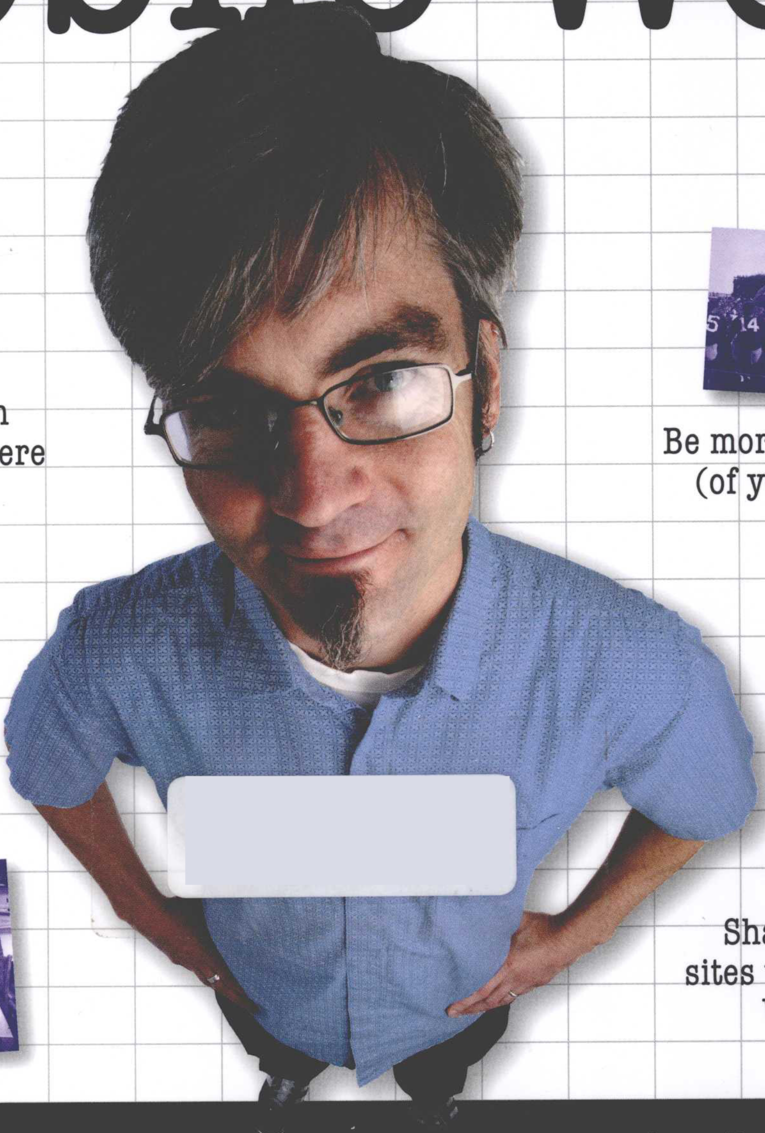
深入浅出移动互联网（影印版）

Head First Mobile Web



Build once, run everywhere

Be more supportive (of your users)

Find your way with geolocation

Put your pages on a small-screen diet

Shape-shift your sites with Responsive Web Design

Lyza Danger Gardner & Jason Grigsby 著

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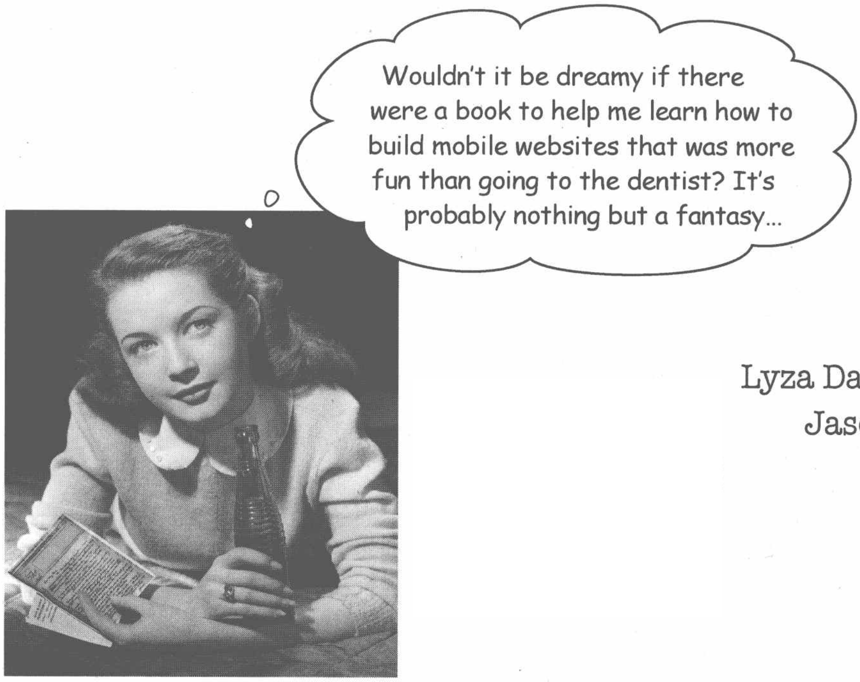
Wouldn't it be dreamy if there were a book to help me learn how to build mobile websites that was more fun than going to the dentist? It's probably nothing but a fantasy...

Lyza Danger Gardner
Jason Grigsby 著

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Table of Contents (Summary)

Table of Contents (the real thing)

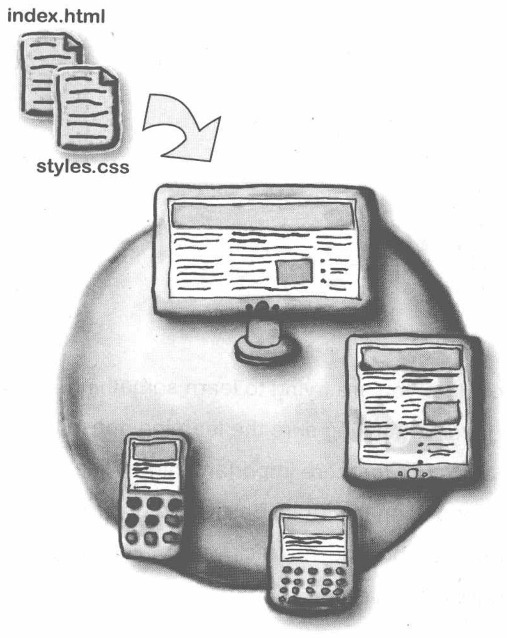
Intro

Your brain on mobile web. Here you are trying to learn something, while here your brain is, doing you a favor by making sure the learning doesn't stick. Your brain's thinking, "Better leave room for more important things, like which wild animals to avoid and whether setting this BlackBerry Bold on fire is going to activate the sprinkler system." So how do you trick your brain into thinking that your life depends on knowing mobile web?

1 getting started on the mobile web
Responsive Web Design

Hey there! Are you ready to jump into mobile?

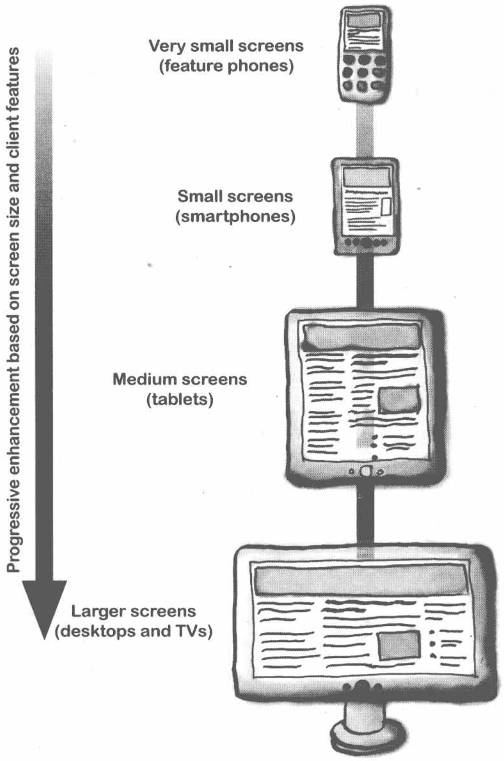
Mobile web development is a wildly exciting way of life. There's glamour and excitement, and plenty of ***Eureka!*** moments. But there is also mystery and confusion. Mobile technology is evolving at bewildering speed, and there's so much to know! Hang tight. We'll start our journey by showing you a way of making websites called ***Responsive Web Design* (RWD)**. You'll be able to adapt websites to look great on a whole lot of mobile devices by building on the web skills you already have.



responsible responsiveness

2 Mobile-first Responsive Web Design

That's a beautiful mobile site. But beauty is only skin deep. Under the covers, it's a different thing entirely. It may look like a mobile site, but it's still a desktop site in mobile clothing. If we want this site to be greased lightning on mobile, we need to start with **mobile first**. We'll begin by dissecting the current site to find the desktop bones hiding in its mobile closet. We'll clean house and start fresh with **progressive enhancement**, building from the basic content all the way to a desktop view. When we're done, you'll have a page that is optimized regardless of the screen size.


Progressive enhancement based on screen size and client features
Very small screens (feature phones)
Small screens (smartphones)
Medium screens (tablets)
Larger screens (desktops and TVs)

3 a separate mobile website

Facing less-than-awesome circumstances

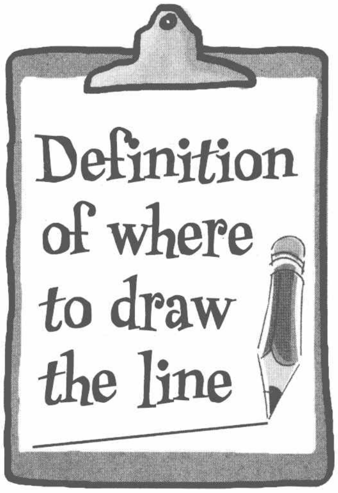
The vision of a single, responsive Web is a beautiful one... in which every site has one layout to rule them all, made lovingly with a mobile-first approach. Mmm...tasty. But what happens when a stinky dose of reality sets in? Like legacy systems, older devices, or customer budget constraints? What if, sometimes, instead of mixing desktop and mobile support into one lovely soup, you need to keep 'em separated? In this chapter, we look at the nitty-gritty bits of **detecting mobile users, supporting those crufty older phones, and building a separate mobile site**.

February 4: Loading supplies and contacting personnel to assist with flood event in Bangladesh. Contact HQ if you are currently unscheduled and available to assist in the effort.

4 deciding whom to support

What devices should we support?

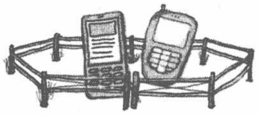
There aren't enough hours in the day to test on every device. You have to draw the line somewhere on what you can support. **But how do you decide?** What about people using devices you can't test on—are they left out in the cold? Or is it possible to build your web pages in a way that will reach people on devices you've never heard of? In this chapter, we're going to mix a magic concoction of **project requirements** and **audience usage** to help us figure out **what devices we support** and **what to do about those we don't**.

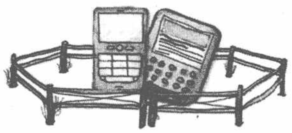


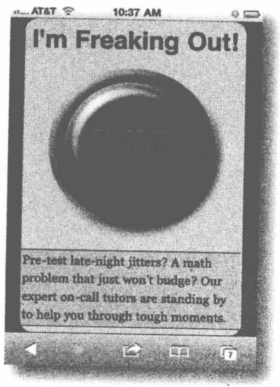
device databases and classes

5 Get with the group

Setting the bar for the devices we support doesn't take care of a few nagging issues. How do we find out enough stuff about our users' mobile browsers to know if they measure up before we deliver content to them? How do we avoid only building (lame) content for the lowest common denominator? And how do we organize all of this stuff so that we don't lose our minds? In this chapter, we'll enter the realm of **device capabilities**, learn to access them with a **device database**, and, finally, discover how to group them into **device classes** so that we can keep our sanity.







Pre-test late-night jitters? A math problem that just won't budge? Our expert on-call tutors are standing by to help you through tough moments.

6 build a mobile web app using a framework

The Tartanator

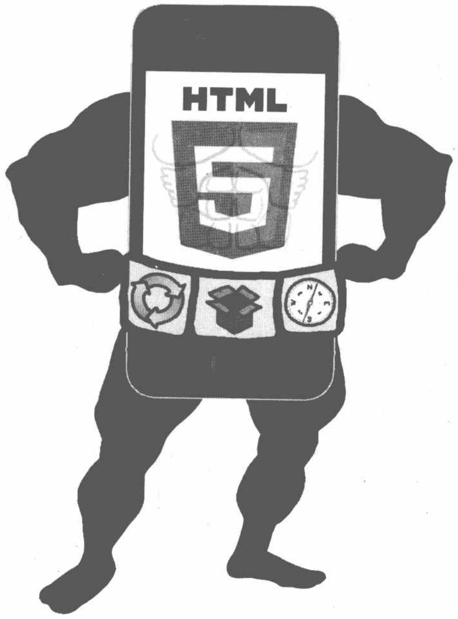
"We want an app!" Just a year or two ago, that hallmark cry generally meant one thing: native code development and deployment for each platform you wanted to support. But native isn't the only game in town. These days, web-based apps for mobile browsers have some street cred—especially now that hip cat **HTML5** and his sidekicks, **CSS3** and **JavaScript**, are in the house. Let's dip our toes into the mobile web app world by taking a **mobile framework**—code tools designed to help you get your job done quickly—for a spin!

Hmmm...it's...nice, but can you make it feel more...like a native app?

7 mobile web apps in the real world

Super mobile web apps

The mobile web feels like that gifted kid in the class. You know, kind of fascinating, capable of amazing things, but also a mysterious, unpredictable troublemaker. We've tried to keep its hyperactive genius in check by being mindful of constraints and establishing boundaries, but now it's time to capitalize on some of the mobile web's natural talents. We can use **progressive enhancement** to spruce up the interface in more precocious browsers and transform erratic connectivity from a burden to a feature by crafting a thoughtful **offline mode**. And we can get at the essence of mobility by using **geolocation**. Let's go make this a super mobile web app!



8 build hybrid mobile apps with PhoneGap

Tartan Hunt: Going native

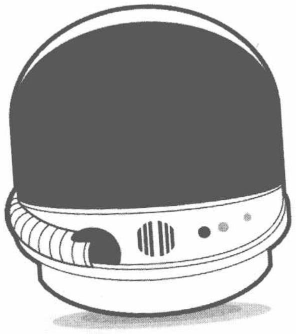
Sometimes you've got to go native. It might be because you need access to something not available in mobile browsers (yet). Or maybe your client simply *must* have an app in the App Store. We look forward to that shiny future when we have access to everything we want in the browser, and mobile web apps share that sparkly allure native apps enjoy. Until then, we have the option of **hybrid development**—we continue writing our **code using web standards**, and use a **library to bridge the gaps** between our code and the device's native capabilities. **Cross-platform native apps built from web technologies**? Not such a bad compromise, eh?

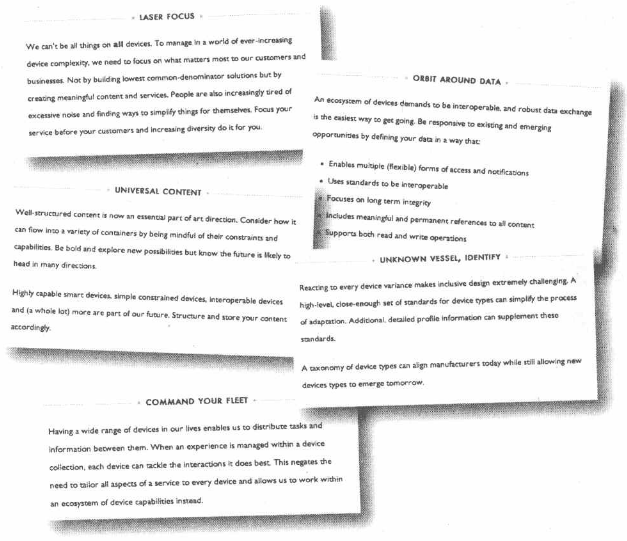
9 how to be future friendly

Make (some) sense of the chaos

Responsive Web Design. Device detection, Mobile web apps. PhoneGap. Wait...which one should we use?

There are an overwhelming number of ways to develop for the mobile web. Often, projects will involve **multiple techniques used in combination**. There is no single right answer. But don't worry. The key is to learn to go with the flow. **Embrace the uncertainty**. Adopt a **future-friendly mindset** and ride the wave, confident that you're flexible and ready to adapt to whatever the future holds.





LASER FOCUS

We can't be all things on **all** devices. To manage in a world of ever-increasing device complexity, we need to focus on what matters most to our customers and businesses. Not by building lowest common-denominator solutions but by creating meaningful content and services. People are also increasingly tired of excessive noise and finding ways to simplify things for themselves. Focus your service before your customers and increasing diversity do it for you.

ORBIT AROUND DATA

An ecosystem of devices demands to be interoperable, and robust data exchange is the easiest way to get going. Be responsive to existing and emerging opportunities by defining your data in a way that:

- Enables multiple (flexible) forms of access and notifications
- Uses standards to be interoperable
- Focuses on long term integrity
- Includes meaningful and permanent references to all content
- Supports both read and write operations

UNIVERSAL CONTENT

Well-structured content is now an essential part of art direction. Consider how it can flow into a variety of containers by being mindful of their constraints and capabilities. Be bold and explore new possibilities but know the future is likely to head in many directions.

Highly capable smart devices, simple constrained devices, interoperable devices and (a whole lot) more are part of our future. Structure and store your content accordingly.

UNKNOWN VESSEL, IDENTIFY

Reacting to every device variance makes inclusive design extremely challenging. A high-level, close-enough set of standards for device types can simplify the process of adaptation. Additional, detailed profile information can supplement these standards.

A taxonomy of device types can align manufacturers today while still allowing new devices types to emerge tomorrow.

COMMAND YOUR FLEET

Having a wide range of devices in our lives enables us to distribute tasks and information between them. When an experience is managed within a device collection, each device can tackle the interactions it does best. This negates the need to tailor all aspects of a service to every device and allows us to work within an ecosystem of device capabilities instead.

i leftovers

The top six things (we didn't cover)

Ever feel like something's missing? We know what you mean... Just when you thought you were done, there's more. We couldn't leave you without a few extra details, things we just couldn't fit into the rest of the book. At least, not if you want to be able to carry this book around without a metallic case and caster wheels on the bottom. So take a peek and see what you (still) might be missing out on.

ii set up your web server environment

Gotta start somewhere

You can't spell "mobile web" without the "web." There are no two ways about it. You're going to need a web server if you want to develop for the mobile web. That goes for more than just completing the exercises in this book. You need somewhere to put your web-hosted stuff, whether you use a third-party commercial web hosting service, an enterprise-class data center, or your own computer. In this appendix, we'll walk you through the steps of **setting up a local web server** on your computer and **getting PHP going** using free and open source software.

1 getting started on the mobile web

Responsive Web Design

Dashing, exciting, fascinating, and oh-so-popular...but am I ready to take the plunge?

Hey there! Are you ready to jump into mobile?

Mobile web development is a wildly exciting way of life. There's glamour and excitement, and plenty of ***Eureka!*** moments. But there is also mystery and confusion. Mobile technology is evolving at bewildering speed, and there's so much to know! Hang tight. We'll start our journey by showing you a way of making websites called ***Responsive Web Design (RWD)***. You'll be able to adapt websites to look great on a whole lot of mobile devices by building on the web skills you already have.

Get on the mobile bandwagon

There's a pretty good chance you own a mobile phone. We know that not simply because you bought this book (smart move, by the way!), but because it's hard to find someone who doesn't own a mobile phone.

It doesn't matter where you go in the world. Mobile phones are being used everywhere, from farmers in Nigeria using their mobiles to find which market has the best price for their crops, to half of Japan's top 10 best-selling novels being consumed and written—*yes, written*—on mobile phones.

At the beginning of 2011, there were 5.2 billion phones being used by the 6.9 billion people on Earth. **More people use mobile phones than have working toilets or toothbrushes.**

The time is now

So yeah, mobile is huge, but it's been big for years. Why should you get on the mobile bandwagon now?

Because **the iPhone changed everything**. It sounds clichéd, but it is true. There were app stores, touchscreens, and web browsers on phones before the iPhone, but Apple was the first to put them together in a way that made it easy for people to understand and use.