Ajax Design Patterns
Ajax, or Asynchronous JavaScript and XML, exploded onto the scene in the spring of 2005 and remains the hottest story among web developers. With its rich combination of technologies, Ajax provides a strong foundation for creating interactive web applications with XML or JSON-based web services by using JavaScript in the browser to process the web server response. Ajax Design Patterns shows you best practices that can dramatically improve your web development projects. It investigates how others have successfully dealt with conflicting design principles in the past and then relays that information directly to you. The patterns outlined in the book fall into four categories:

- Foundational technology: Examines the raw technologies required for Ajax development
- Programming: Exposes techniques that developers have discovered to ensure their Ajax applications are maintainable
- Functionality and usability: Describes the types of user interfaces you’ll come across in Ajax applications, as well as the new types of functionality that Ajax makes possible
- Development: Explains the process being used to monitor, debug, and test Ajax applications

Ajax Design Patterns will also get you up to speed with core Ajax technologies, such as XMLHttpRequest, the DOM, and JSON. Technical discussions are followed by code examples so you can see for yourself just what is—and isn’t—possible with Ajax. This handy reference will help you to produce high-quality Ajax architectures, streamline web application performance, and improve the user experience.

Michael Mahemoff holds a PhD in Computer Science and Software Engineering from the University of Melbourne, where his thesis was "Design Reuse in Software Engineering and Human-Computer Interaction." He lives in London and consults on software development issues in banking, health care, and logistics. "Michael Mahemoff’s Ajax Design Patterns is a truly comprehensive compendium of web application design expertise, centered around but not limited to Ajax techniques. Polished nuggets of design wisdom are supported by tutorials and real-world code examples resulting in a book that serves not only as an intermediate to expert handbook but also as an extensive reference for building rich interactive web applications."—Brent Ashley, remote scripting pioneer

**Book Information**

Paperback: 656 pages  
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Language: English  
ISBN-10: 0596101805  
Although I think the book is mistitled, there's still a lot of value to be gleaned from Ajax Design Patterns by Michael Mahemoff. It's almost more like a cookbook than a patterns guide...

Contents:
Part 1 - Introduction: Introducing Ajax; A Pattern-Led Tutorial; Ajax Design - Principles and Patterns
Part 2 - Foundational Technology Patterns: Ajax App; Display Manipulation; Web Remoting; Dynamic Behavior; Extended Technologies
Part 3 - Programming Patterns: Web Services; Browser-Server Dialogue; DOM Population; Code Generation and Reuse; Performance Optimization
Part 4 - Functionality and Usability Patterns: Widgets; Page Architecture; Visual Effects; Functionality
Part 5 - Development Patterns: Diagnosis; Testing
Part 6 - Appendixes: Ajax Frameworks and Libraries; Setting Up The Code Samples; Patterns and Pattern Languages; References; Index

Each of the chapters, such as Widgets, show a number of techniques and features that you can use in an Ajax application. In this particular case, there's the Slider, Progress Indicator, Drilldown, Data Grid, Rich Text Editor, Suggestion, Live Search, and Live Command-Line. Although each of these are presented as a "pattern", I think that's really a misuse of the term as it's commonly utilized in our industry. Patterns are general architectures that have been developed over time to solve particular types of design issues. A pattern called "Slider" is really just an example of how a slider widget can be used effectively in an Ajax application. Because of the specificity of a slider, I see that as more of a recipe than a pattern. Having cleared that gripe, it's still an effective book.

If you think you know anything about Ajax, you're wrong. After you read this book you'll realize how little you knew. Michael Mahemoff has a PhD in Computer Science, but it might as well be on Ajax since I've never read a book with so much useful information about it. There are about 8 or 9 Ajax books on the market right now and none of them come close to giving the useful information this one does and that is only after reading the first 150 pages. This book really is the complete tutorial.
and reference to learning and using Ajax properly. The first 2 chapters go over the basic components of Ajax and some basic code examples different techniques Ajax is used to enhance functionality and usability: live search, progress indicators and the one-second spot highlight. The end of chapter 2 is a kind of teaser of what is to come in explaining some of the patterns that will be discussed with website examples to illustrate how they are done: data grids, suggestion, popup, virtual workspace, browser-side cache, fat client, drag-and-drop, image slideshow, web services, etc. Chapter 3 focuses on the basics of an ideal Ajax application and some the design principles that programmers should follow such as following web standards, accessibility, bandwidth issues, latency, and graceful degradation, among others. He sets you in the right direction in thinking how you should code your application with all these ideas in mind since proper patterns will give you smoother working applications with fewer problems when it is released into production. It is a very interesting chapter that does not go into much code but is more of a background on the issues that need to be thought about before developing your architecture.

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