**Managing Dependencies: Part 1**

**Note**

This section is based heavily on the excellent RequireJS documentation at [http://requirejs.org/docs/jquery.html](http://requirejs.org/docs/jquery.html" \t "_new), and is used with the permission of RequireJS author James Burke.

When a project reaches a certain size, managing the script modules for a project starts to get tricky. You need to be sure to sequence the scripts in the right order, and you need to start seriously thinking about combining scripts together into a bundle for deployment, so that only one or a very small number of requests are made to load the scripts. You may also want to load code on the fly, after page load.

RequireJS, a dependency management tool by James Burke, can help you manage the script modules, load them in the right order, and make it easy to combine the scripts later via the RequireJS optimization tool without needing to change your markup. It also gives you an easy way to load scripts after the page has loaded, allowing you to spread out the download size over time.

RequireJS has a module system that lets you define well-scoped modules, but you do not have to follow that system to get the benefits of dependency management and build-time optimizations. Over time, if you start to create more modular code that needs to be reused in a few places, the module format for RequireJS makes it easy to write encapsulated code that can be loaded on the fly. It can grow with you, particularly if you want to incorporate internationalization (i18n) string bundles, to localize your project for different languages, or load some HTML strings and make sure those strings are available before executing code, or even use JSONP services as dependencies.

**Getting RequireJS**

The easiest way to use RequireJS with jQuery is to [download a build of jQuery that has RequireJS built in](http://requirejs.org/docs/download.html" \t "_new). This build excludes portions of RequireJS that duplicate jQuery functionality. You may also find it useful to download [a sample jQuery project that uses RequireJS](http://requirejs.org/docs/release/0.11.0/jquery-require-sample.zip).

**Using RequireJS with jQuery**

Using RequireJS in your page is simple: just include the jQuery that has RequireJS built in, then require your application files. The following example assumes that the jQuery build, and your other scripts, are all in a scripts/ directory.

**Example 10.5. Using RequireJS: A simple example**

<!DOCTYPE html>

<html>

<head>

<title>jQuery+RequireJS Sample Page</title>

<script src="scripts/require-jquery.js"></script>

<script>require(["app"]);</script>

</head>

<body>

<h1>jQuery+RequireJS Sample Page</h1>

</body>

</html>

The call to require(["app"]) tells RequireJS to load the scripts/app.js file. RequireJS will load any dependency that is passed to require() without a .js extension from the same directory as require-jquery.js, though this can be configured to behave differently. If you feel more comfortable specifying the whole path, you can also do the following:

<script>require(["scripts/app.js"]);</script>

What is in app.js? Another call to require.js to load all the scripts you need and any init work you want to do for the page. This example app.js script loads two plugins, jquery.alpha.js and jquery.beta.js (not the names of real plugins, just an example). The plugins should be in the same directory as require-jquery.js:

**Example 10.6. A simple JavaScript file with dependencies**

require(["jquery.alpha", "jquery.beta"], function() {

//the jquery.alpha.js and jquery.beta.js plugins have been loaded.

$(function() {

$('body').alpha().beta();

});

});