

# Build Tools



Yura

Justin



Wait, isn't this the web?



# What we do now

- ◆ Concatenate files
- ◆ Minify
- ◆ Manage modules
- ◆ Build UIO themes
- ◆ rewrite scripts references in demos and tests

<http://wiki.fluidproject.org/display/fluid/Custom+Infusion+Builds+With+Ant>



# What we could be doing

- ◆ jslint
- ◆ run unit tests
- ◆ We can do this automatically









**GRUNT**







**GRUNT**





# What is GRUNT?

- ◆ Task runner
- ◆ Built with JavaScript
- ◆ Runs in node.js
- ◆ Supported by hundreds of plugins

<http://gruntjs.com>





# Requirement

node.js

<http://nodejs.org>





# Setup - commands

- ◆ `npm install -g grunt-cli`
- ◆ `npm install -g grunt-init`
- ◆ `npm install grunt --save-dev`

<http://gruntjs.com/getting-started>





# Setup - files

- ◆ package.json (used by npm)
- ◆ Gruntfile.js

<http://gruntjs.com/getting-started>





# package.json

- ◆ installs dependencies with npm

<http://gruntjs.com/getting-started>





# Gruntfile.js

- ◆ Valid JavaScript file
- ◆ Project and task configuration
- ◆ Load plugins / tasks

<http://gruntjs.com/getting-started>





# Gruntfile.js

## Wrapper Function

```
module.exports = function(grunt) {  
  // Do grunt-related things in here  
};
```

<http://gruntjs.com/getting-started>





# Gruntfile.js

## Configuration

```
grunt.initConfig({
  pkg: grunt.file.readJSON('package.json'),
  uglify: {
    options: {
      banner: '/*! <%= pkg.name %> <%= grunt.template.today("yyyy-mm-dd") %> *^n'
    },
    build: {
      src: 'src/<%= pkg.name %>.js',
      dest: 'build/<%= pkg.name %>.min.js'
    }
  }
});
```

<http://gruntjs.com/getting-started>





# Gruntfile.js

## Load Plugins

```
grunt.loadNpmTasks('grunt-contrib-uglify');
```

<http://gruntjs.com/getting-started>





# Gruntfile.js

## Default task

```
grunt.registerTask('default', ['uglify']);
```

<http://gruntjs.com/getting-started>





**GRUNT**

# Gruntfile.js

```
module.exports = function(grunt) {  
  grunt.initConfig({  
    pkg: grunt.file.readJSON('package.json'),  
    uglify: {  
      options: {  
        banner: '/*! <%= pkg.name %> <%= grunt.template.today("yyyy-mm-dd") %> *^n'  
      },  
      build: {  
        src: 'src/<%= pkg.name %>.js',  
        dest: 'build/<%= pkg.name %>.min.js'  
      }  
    }  
  });  
  grunt.loadNpmTasks('grunt-contrib-uglify');  
  grunt.registerTask('default', ['uglify']);  
};
```

<http://gruntjs.com/getting-started>





**GRUNT**

# Plugins

- ◆ concatenation
- ◆ minification
- ◆ lint
- ◆ unit tests
- ◆ css compilation (less, sass)
- ◆ etc.

<http://gruntjs.com/plugins>





**GRUNT**

Demo





**GRUNT**











# What is Bower?

- ◆ Built by Twitter
- ◆ Package Manager
- ◆ can install packages from Git
- ◆ Runs in node.js

<http://bower.io>  
<https://github.com/bower>





**GRUNT**











# What is Yeoman?

- ◆ Scaffolding built around Grunt and Bower
- ◆ Runs in node.js

<http://yeoman.io>



> grunt refactorInfusion