

# Building WordPress sites with AngularJS and the RESTful plugin JSON API

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# Introduction

## Web Development is Changing...

- Modern web development
  - Less Server Platform (PHP, Java, .NET)
  - More Web Browser Platform (HTML/CSS/**JavaScript**)
- Modern web applications
  - Web server is a repository of user interface templates (HTML, CSS, JS resources) and it provides access to data
  - Binding of templates and data is handled through JavaScript frameworks on the web browser
  - Navigating from page to page is handled by Web Browser based JavaScript routing systems that do not involve reloading the entire page from the server
  - Web browsers use AJAX to send/receive data to/from RESTful services provided by the web server

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## Why is Web Development Changing?

- Web browsers and client devices are becoming more capable
  - Devices in general (desktops, laptops, tablets, phones) are very powerful
  - Web browsers are emerging as a true platform
    - Chromebooks, Chrome Store
- Web technology is being used to construct UIs for traditional apps
  - PhoneGap
  - Windows 8 Apps
- JavaScript on the Server - Node.JS
  - Used for development and development tooling
  - More and more libraries being created
- Because JavaScript is being used everywhere, developers in general increasingly want to use in the browser

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## How does this Web Development Change Benefit Users?

- Pushing more code to the browser results in application called Single Web Page Applications more commonly called Single Page Applications or simply SPAs
- How do users benefit from SPAs?
  - SPAs in general are more functional (without a page reload) and behave more like desktop apps
- In a high network latency environment, a well written SPA can continue to perform acceptably for the user
  - Example: Marriott and Conference Center Internet
- Many SPAs can operate in **offline** mode allow the user to use the web application even when disconnect then when they connect again everything gets synced up

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## WordPress (and other Content Management Systems)

- When people think WordPress, they think blogging software
  - But really, WordPress is so much more... Truly, its a very powerful, extensible and capable Content Management System
- WordPress has been around for a long time, is well tested, well supported by a huge community of bloggers, developers, plugin & theme providers
- WordPress is a great tool but it was also developed in an earlier time when web applications were more server-driven and less browser-driven
- Out of the box
  - WordPress relies upon the server for all processing of the user interface
  - Real JavaScript functionality is limited

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## Transforming WordPress

- WordPress does not have to be limited to older server-driven techniques
- To bring WordPress into the next generation of web apps
  - Create themes that leverage the power of JavaScript libraries such as KnockoutJS, EmberJS and AngularJS.
  - Employ plugins which provides RESTful services that provide access to core WordPress data
  - Up and coming - WP REST API - new RESTful API for WordPress
- The result
  - Blogs and websites which perform better with the latest development technologies

# Using AngularJS

## Why AngularJS?

- AngularJS is a complete framework for building Single Page Applications
  - Using the MVC pattern, it can manage your models and views including routing to different views
  - Supports two-way data binding allow easy data collection via forms
  - Provide directives to build complex reusable UI components that integrate nicely into your application
  - Provides an excellent mocking library so you can follow test-driven development principles and really write unit tests for your code before implementation
  - Allows for the creation of cross cutting services that can provide useful functionality throughout your application
- AngularJS is the hot web development technology - everyone from small shops to very large corporations are embracing it

# Introduction

## Goals for Today...

- Inform you of the changing landscape of web development with WordPress (or really any other web development platform)
- Demonstrate one of the many technologies changing web development today, AngularJS within the context of WordPress
- Persuade you to focus less on the server and embrace JavaScript (and its many frameworks) and the Web Browser (as a true platform not just a viewer) for sophisticated and powerful web applications



# Let's Get Started...

## What we will cover

- Starting with a clean copy of WordPress
  - Create a new theme
  - Add AngularJS to the theme
  - On the blog home page, replace the usual list of blog entries with an AngularJS powered list
  - Install the RESTful JSON API Plugin
  - Use AngularJS to display a specific blog entry

# Thank You for Attending!

## Some Good AngularJS Resources

- Some good resources for learning more about AngularJS
  - Pro AngularJS from APress (<http://www.apress.com/9781430264484>)
  - Ng-Book (<https://www.ng-book.com/>)
  - WintellectNow Training Videos (<https://www.wintellectnow.com/Videos/Index?searchString=AngularJS>)
  - Accelebrate, Inc. On-site Training (<http://www.accelebrate.com/>)
- WordPress REST API (instead of the JSON API Plugin)
  - <http://wp-api.org/>