

Who's Mike?

- BS in CS from RUTGERS

 INE STATE UNIVERSITY

 THE STATE UN
- "Petrochemical Research Organization"
- Ai-Logix, Inc. (now AudioCodes)
- Amateur Computer Group of New Jersey
- Publications





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Objectives

- What is Meteor?
- Why Meteor?
- The Seven Principles
- Getting Started with Meteor
- Live Demos (yea!)
- Meteor Resources

What is Meteor? (I)

• "...an open-source platform for building topquality web apps in a fraction of the time, whether you're an expert developer or just getting started."

Meteor Web Site, http://www.meteor.com/

- A full-stack framework using JavaScript
- Compiles, combines, and distributes your HTML, CSS, and JavaScript

What is Meteor? (2)

- Built on top of

 Built on top of
- Shares code between the client-side and server-side of your application

What is Node.js?



• "...a platform built on Chrome's JavaScript runtime for easily building fast, scalable network applications. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient, perfect for data-intensive real-time applications that run across distributed devices."

Node.js Web Site, http://www.nodejs.org/

Why Meteor?

• "Meteor is radically faster, radically easier platform for Internet-scale thick client applications."

Avital Oliver, "Meteor Smart Packages", ETE Conference, 4/2/2013

- Easy to learn
- Rapid application development
- Powerful data synchronization

The Seven Principles

Data on the Wire

Simplicity = Productivity

- One Langauge
- Database Everywhere
- Latency Compensation
- Full-Stack Reactivity
- Embrace the Ecosystem

(#1) Data on the Wire

- Don't send HTML over the network
- Let client decide how to render data
- Browser renders the templates as data changes

(#2) One Language

- Everything is JavaScript
- Built-in JavaScript packages include:
 - CoffeeScript
 - jQuery
 - Bootstrap
 - Backbone





mongoDB (#3) Database Everywhere

- MongoDB works on both the client and the server
- The client-side database API looks just like MongoDB server-side API
- Database operations are cached in memory on the client-side to yield...

(#4) Latency Compensation

- Designed to create a zero-latency connection to the database
- Database on client-side is updated first
- Database on server-side is updated later

(#5) Full-Stack Reactivity

- Embraces the concept of reactive programming
- Everything is real-time
- Templates automatically re-render themselves as data changes

(#6) Embrace the Ecosystem

- Meteor is open-source
- Integrates existing open-source tools and frameworks

(#7) Simplicity = Productivity

- For something to <u>seem</u> simple, it must actually <u>be</u> simple
- API are plain and simple

Conventions Used in This Presentation

- Command Prompt (\$)
- Keywords (meteor, create, etc.)
- Variables (variable)

Getting Started

- Download Meteor
- Create your first Meteor app
- Explore the built-in examples

Download Meteor

Unix/Linux

```
$ curl https://install.meteor.com
sh
```

- Windows (unofficial support)
 - win.meteor.com
 - developed by Tom Wijsman
 - now facilitated by Stephen Darnell

Create Your First Meteor App

- \$ meteor create myapp
- \$ cd myapp
- myapp \$ meteor

Live Demo!

Explore the Built-in Examples

- Four (4) built-in examples
- Leaderboard (simplest)
 - \$ meteor create --example
 leaderboard

Live Demo!

Structuring Your Meteor Application

- Special folders:
 - /server
 - /client
 - /public
 - /lib
 - /collections

Smart Packages (I)

- JavaScript programs
- Extend your Meteor environment
- Injects code into client-side or server-side of your application

Smart Packages (2)

- Core smart packages:
 - spark
 - reload
 - livedata
 - mongo-livedata
 - minimongo

Smart Packages (3)

- List all available packages
 - \$ meteor list
- Adding a package
 - \$ meteor add packageName
- Removing a package
 - \$ meteor remove packageName

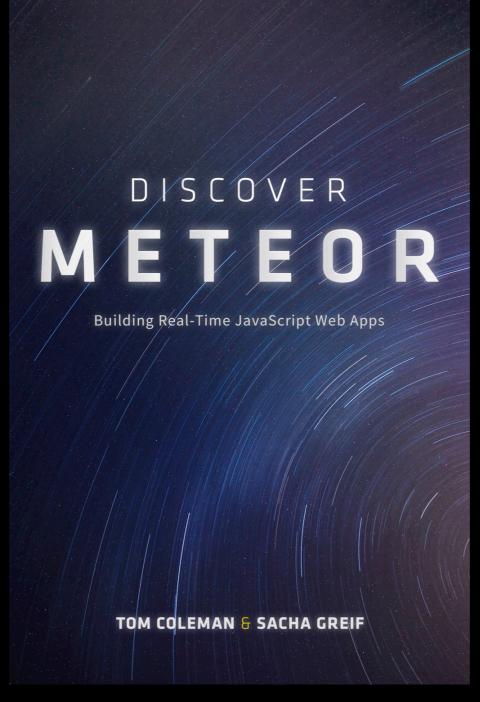
Deploying Your Meteor Application

- Full application server
- Deploy on Meteor's infrastructure
 - \$ meteor deploy myapp.meteor.com

Meteorite

- A wrapper utility for Meteor
 - developed by Tom Coleman
- Supports third-party applications
- Does everything Meteor does plus...

Meteor Resources (I)



Meteor Resources (2)

- meteor.com
- github.com/meteor/meteor
- themeteorbook.com
- eventedmind.com
- atmosphere.meteor.com
- fastcolabs.com/3007015/how-usemysql-meteor

Upcoming Events (I)

- Trenton Computer Festival
 - March 14-15, 2014
 - tcf-nj.org
- Emerging Technologies for the Enterprise
 - April 22-23, 2014
 - phillyemergingtech.com

Upcoming Events (2)



Trenton Computer Festival



Thanks!

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