

Using TypeScript for Large AngularJS Applications

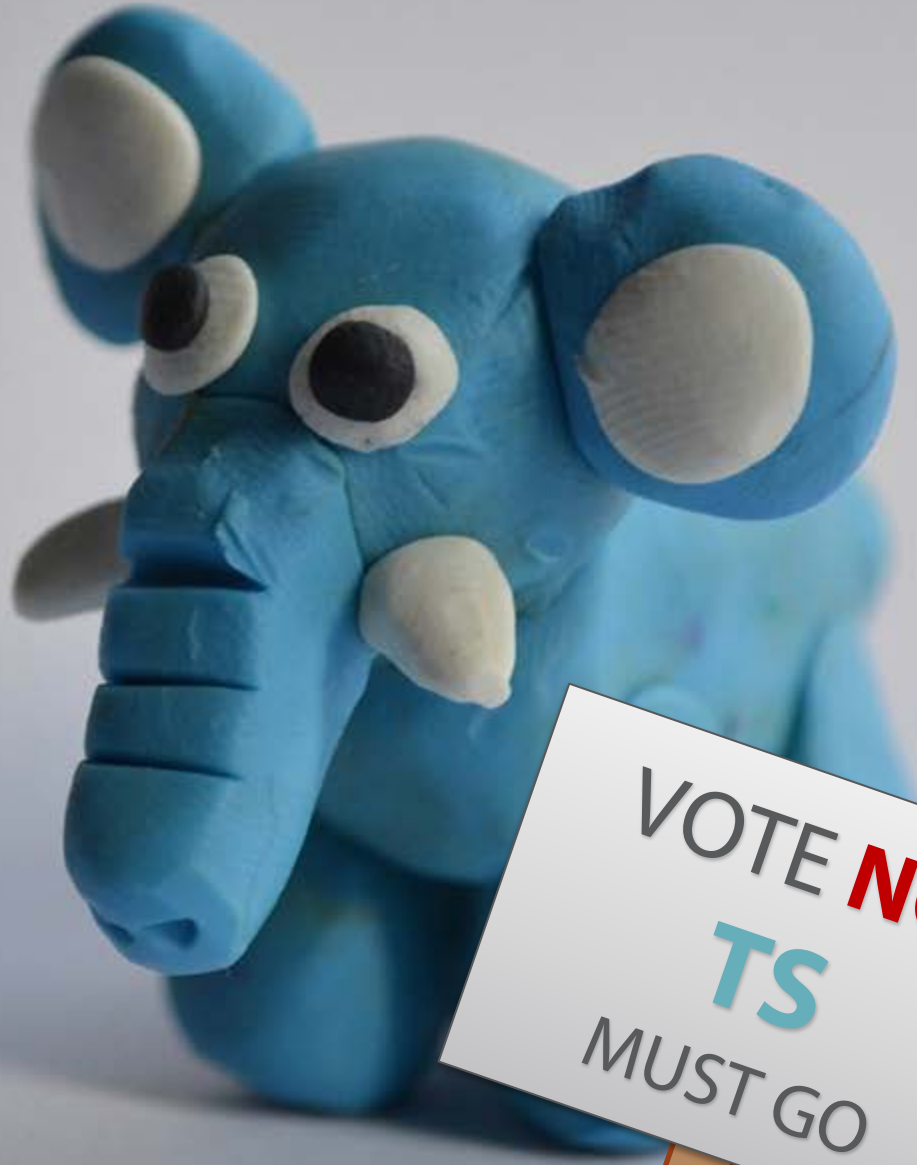
Getting Started: Setting Up the Workflow and IDE



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TypeScript



VOTE **YES**
ON
TS

VOTE **NO**
TS
MUST GO

**MAKE SOFTWARE
NOT WAR**







TypeScript





TypeScript
or Bust





Understanding
& Awareness



Tips &
Insight

Background on TypeScript and AngularJS

TypeScript

Familiarity with concepts

Understanding of how it works



Know the core concepts

Benefit from having tried it out or using it

Why Combine the Two?

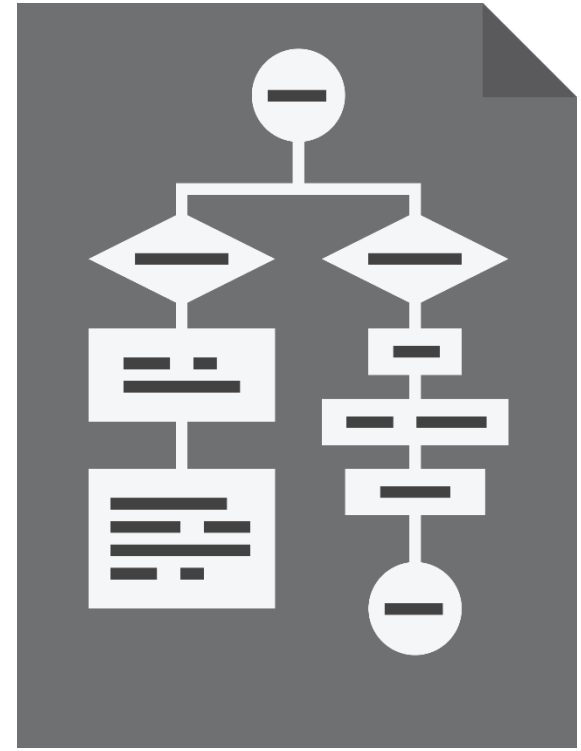
JavaScript Heavy



UI Data Binding



Backend Requests



Business Logic

TypeScript

Static typing

Encapsulation through **modules, classes, interfaces**

More...

JavaScript Objects Everywhere

```
controller.$inject = ['BlogPostService'];  
function controller(blogPostService) {  
    var vm = this;  
    var post = blogPostService.getById(10);  
    vm.title = post.title;  
}
```

JavaScript Objects Everywhere (+TypeScript)

```
interface IBlogPostService {  
    getById(id: number): IBlogPost;  
}
```

```
interface IBlogPost {  
    title: string;  
}
```

```
controller.$inject = ['BlogPostService'];  
function controller(blogPostService: IBlogPostService) {  
    var vm = this;  
    var post = blogPostService.getById(10);  
    vm.title = post.title;  
}
```

Runtime Testing of Feature



IDE Support for Refactoring JavaScript Code

Find All References

Go to Definition

Refactor -> Rename

Type All the Things!

JavaScript

```
controller.$inject = ['$http'];
function service($http) {
  return {
    getByid: function getByid(id) {
      return $http.get('/blogpost/' + id);
    }
  };
}
```

JavaScript + TypeScript

```
interface IBlogService {}
interface IBlogPost {}

class BlogService implements IBlogService {
  static $inject = ['$http'];
  constructor(private $http: ng.IHttpService) {
  }

  getByid(id: string): ng.IPromise<IBlogPost> {
    return this.$http.get('/blogpost/' + id);
  }
}
```

Committing to TypeScript



More development
time upfront

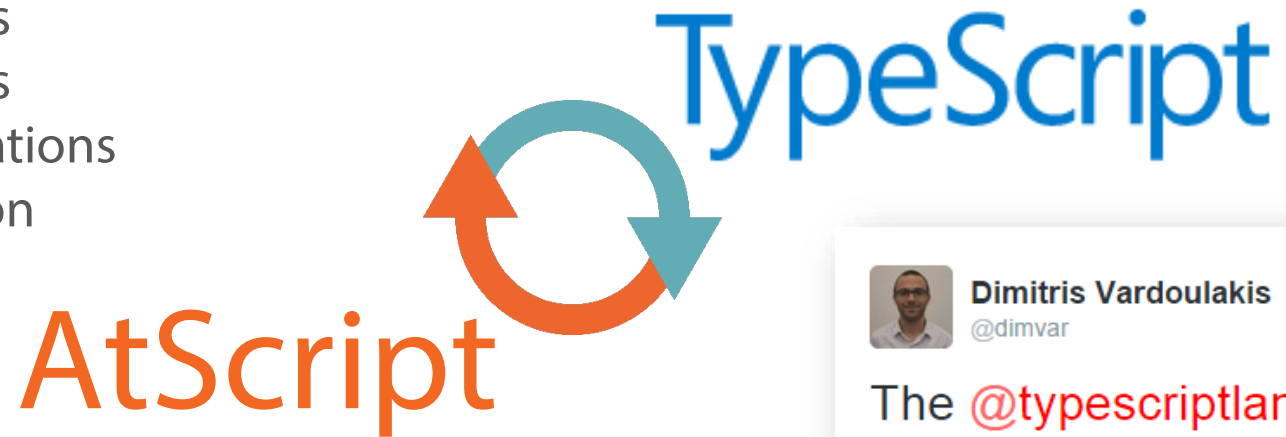


Faster refactor
iterations as app grows

Google's AtScript

Enhancements

- Type Annotations
- Field Annotations
- Metadata Annotations
- Type Introspection



Anders Hejlsberg
@ahejlsberg

[#AtScript](#) may be a syntactic superset of [#TypeScript](#), but with no static type checker or IDE tooling. Hopefully we can marry the two.

Twitter: 10:26 AM - 1 Nov 2014



Dimitris Vardoulakis
@dimvar

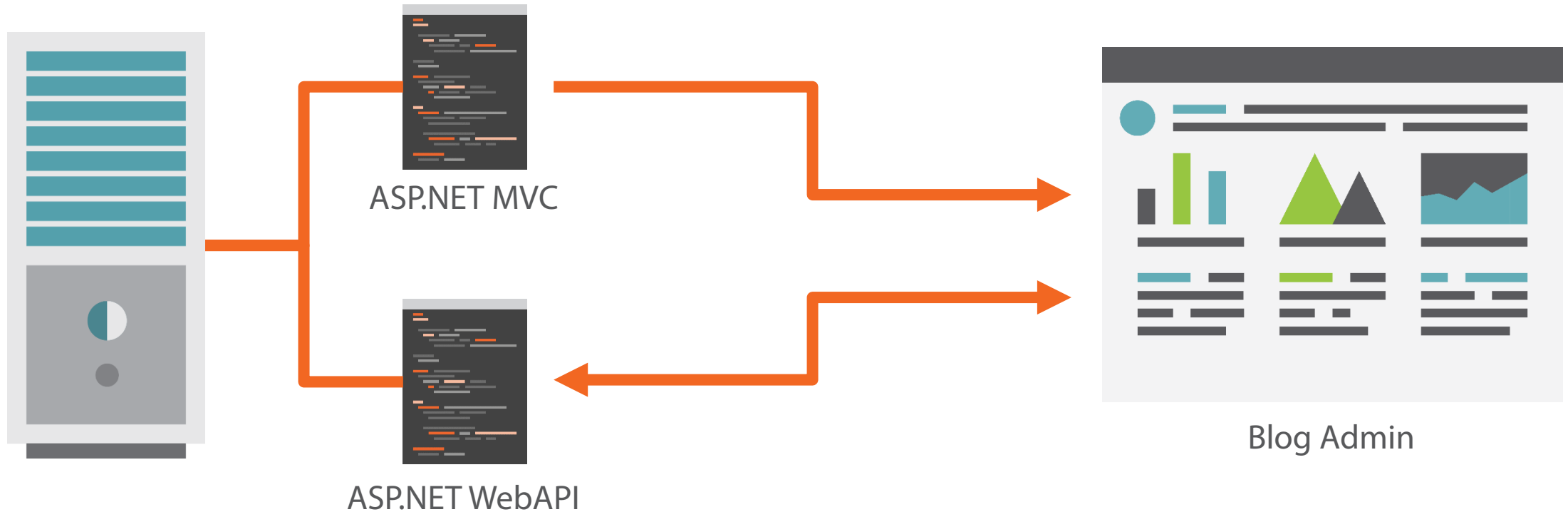
The [@typescriptlang](#) team visited Google today and we had a great chat. I'm very excited about what's in store for JS!

Twitter: 7:20 PM - 13 Nov 2014

The Project Plan

Project Host

AngularJS App



TypeScript in AngularJS Plan of Attack



Course Module 2

Config and Run Phases
Constants/Values
Decorators

Course Module 3

Provider Types
Directives

Course Module 4

Deep Dive into Scenarios

Using Definitely Typed and TSLint

Setting Up Visual Studio 2013

Following a Style Guide
