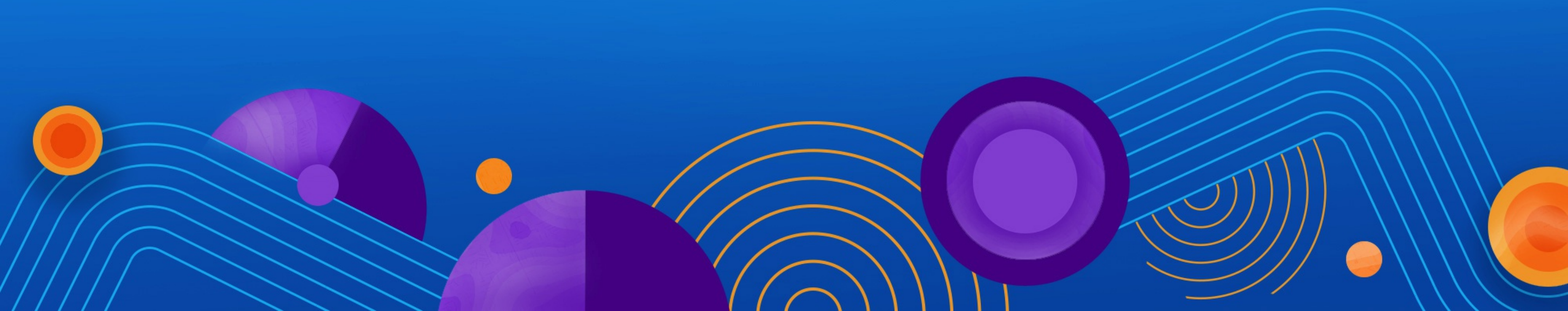




Using TypeScript with ArcGIS API for Javascript

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TypeScript



TS

What is TypeScript?

- Superset of JavaScript (JavaScript *is* valid TypeScript)
- Integrates newer features of JavaScript
- Includes ES7 & ES8 features

Not every declaration needs a type

```
let center = [-100.33, 25.69];  
// or  
let center: number[] = [-100.33, 25.69];
```

- The compiler is smart enough to figure it out

```
let center: number[];
```

```
// valid
```

```
center = [-100.33, 25.69];
```

```
// invalid
```

```
center = ["-100.33", "25.69"];
```

Interfaces

```
interface Props {  
  view: MapView;  
  initialCenter: Coordinates;  
}
```

```
interface Point {  
  x: number;  
  y: number;  
}
```

```
interface Point3D extends Point {  
  z: number;  
}
```

Type Alias

```
type Point = {  
  x: number;  
  y: number  
}  
  
type UIParams = {  
  element: HTMLElement | string,  
  position?: string  
};  
  
type Points = Point[];  
  
function addMe(point: Point, params: UIParams) {...}
```

- Cannot *extend* types

Classes

```
class MyPoint implements Point3D {  
    x = 0;  
    y = 0;  
    z = 0;  
}
```


Tooling and configuration

- tsc
- Visual Studio Code
- ArcGIS 4.x Typings
- ArcGIS 3.x Typings
- Dojo typings

TypeScript in the JSAPI

```
/// <amd-dependency path="esri/core/tsSupport/declareExtendsHelper" name="__extends" />
/// <amd-dependency path="esri/core/tsSupport/decorateHelper" name="__decorate" />

import { declared, subclass, property, shared, read, write } from "esri/core/tsSupport/declare";

interface Base extends Layer, SceneService {}
interface BaseConstructor { new (): Base; }
function getBase(): BaseConstructor {
    return <any> Layer;
}

@subclass("esri.layers.SceneLayer")
class SceneLayer extends declared(getBase(), SceneService) {
    // ...
}
```

JSAPI Widget Development

- Sample Widget

Demo

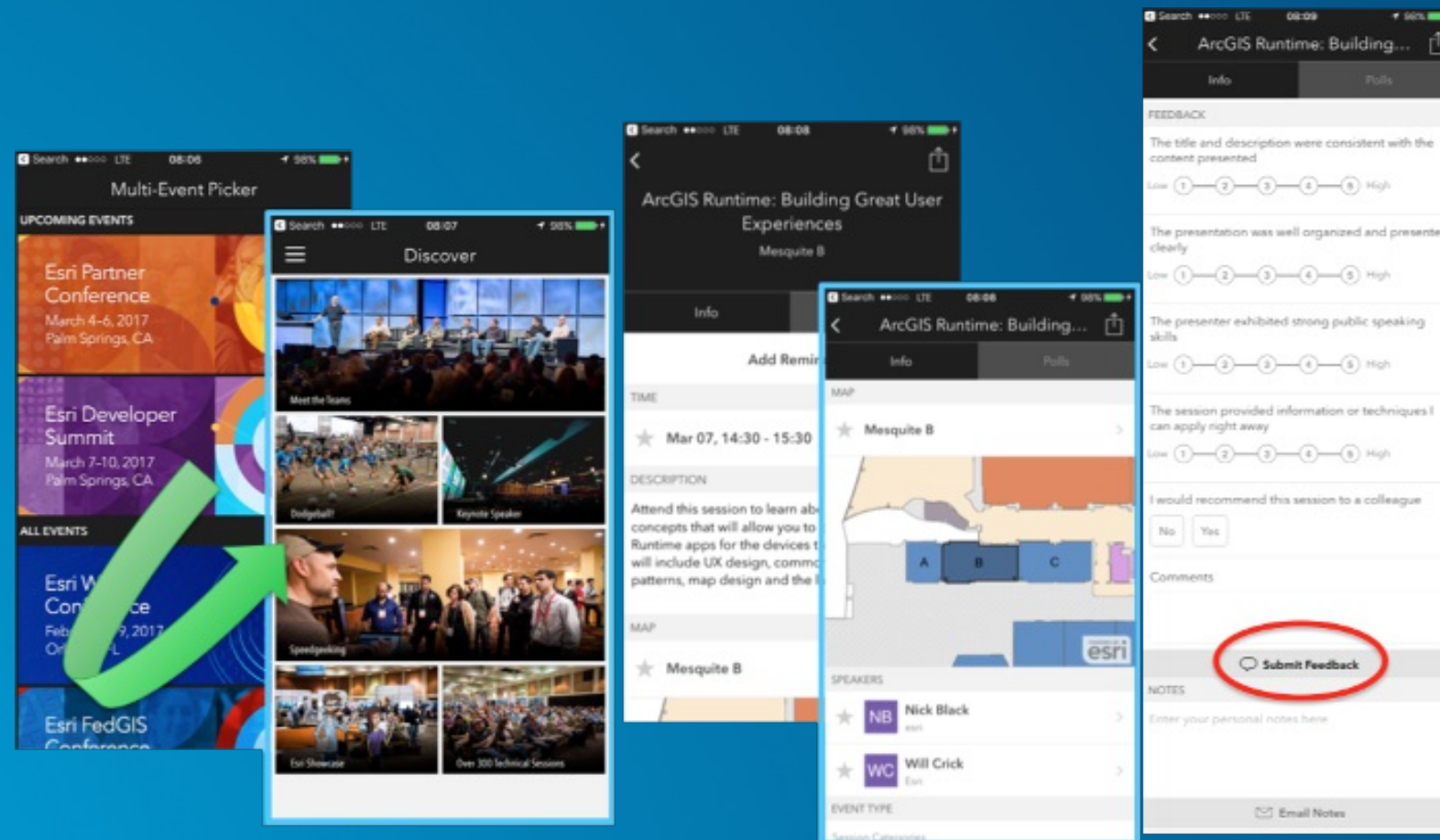
More Guidance

- [TypeScript - Setting up your development environment](#)

Questions?



Help us to improve filling out the survey



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Slides: github.com/odoe/presentations/2017-devsummit-ps-using-typescript/



esri

**THE
SCIENCE
OF
WHERE**