

FUTURE DECODED

6-7 OTT '16 / MILANO

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WEB04

Da JavaScript a TypeScript

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Topic take aways

- **Focus:** perchè TypeScript e perchè migrare/integrare una soluzione JavaScript esistente a TypeScript
- **Prerequisito:** conoscenza basilare di TypeScript: sintassi, costrutti
- **Opzionale:** per comprendere i concetti fondamentali, non è necessario conoscere in dettaglio ogni strumento utilizzato nello stack tecnologico delle demo (riferimenti in fondo alla presentazione)
- **Goodies:** Struttura real-world della soluzione demo

Nelle puntate precedenti

- **CDays 2012:** JavaScript avanzato: sfruttare al massimo il web
- **CDays 2013:** Usare Knockout.js
- **CDays 2014:** Single Page Applications: Come? Cosa? Perché?
- **CDays 2015:** Code quality e test automatizzati con JavaScript

Disponibili sul sito dei Community Days: <http://www.communitydays.it/events/>

Follow me live

DEMO

<http://github.com/robymes/cdays16>

SLIDE

<http://www.slideshare.net/RobertoMessori/da-javascript-a-typescript>

Agenda

- Chi siamo, da dove veniamo, dove andiamo: JavaScript
- TypeScript vive e lotta con noi
- Pronti, partenza, JavaScript
- Mamma, devo integrare TypeScript

Chi siamo, da dove veniamo: JavaScript

"JavaScript (in 1996) had to 'look like Java' only less so, be Java's dumb kid brother or boy-hostage sidekick. Plus, I had to be done in ten days or something worse than JS would have happened."

"JavaScript (nel 1996) doveva 'sembrare Java', solo un po' meno, essere il suo fratellino imbranato o il suo partner inesperto. In più dovevo essere pronto in dieci giorni o sarebbe accaduto qualcosa di peggio di JavaScript stesso."

Brendan Eich, ideatore di JavaScript - 2010

TypeScript vive e lotta con noi (dal 2012)

- Linguaggio e strumenti per **sviluppare applicazioni complesse che scalano in grandi team di sviluppo** ("JavaScript that scales")
 - <https://www.typescriptlang.org/>
 - Installazione (*ultima versione 2.0.3*): **npm install -g typescript**
 - Transpiling verso JavaScript: **tsc helloworld.ts → helloworld.js**
 - Open source
 - Inizia e finisce con **JavaScript**
 - Supporta le ultime versioni di JavaScript ed anche alcune future evoluzioni (async/await, decorators)

TypeScript

Starts with JavaScript

All JavaScript code is TypeScript code, simply copy and paste
All JavaScript libraries work with TypeScript

Optional Static Types, Classes, Modules

Enable scalable application development and excellent tooling
Zero cost: Static types completely disappear at run-time

Ends with JavaScript

Compiles to idiomatic JavaScript
Runs in any browser or host, on any OS



1 Ottobre 2012

Anders Hejlsberg
Introducing TypeScript

Channel 9

<http://bit.ly/2dqJ3NN>

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A nighttime cityscape featuring several tall skyscrapers with illuminated windows. In the foreground, there is a multi-lane highway with long-exposure light trails from cars, showing red and white streaks. An elevated walkway or bridge with railings and some greenery runs across the middle ground. The image is split diagonally from the bottom left to the top right. The left side is a darker, more muted version of the scene, while the right side is brighter and shows the light trails and bridge more clearly.

DEMO

TypeScript ABC

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“Ma io ho un’applicazione JavaScript”

- Bello TypeScript, ma la mia azienda ha investito tempo, formazione, personale e denaro per sviluppare un’applicazione in JavaScript
- Dobbiamo migrare l’intera codebase? **No.**
- Quanto costa? **Il tempo di imparare il linguaggio.**
- Ci vogliono nuove competenze? **No (anzi...).**



Stack tecnologico sviluppo JavaScript



- **npm:** Node.JS Package Manager
 - *package.json*



- **Bower:** Repository di librerie di terze parti
 - *bower.json*



- **Gulp:** Task manager
 - *gulpfile.js*

Stack tecnologico sviluppo JavaScript



- **Karma:** Test runner
 - *karma.js*



- **Jasmine:** Unit testing



- **Eslint:** Linter, code quality, code standards
 - *.eslintrc.json*

A night cityscape featuring several tall skyscrapers with illuminated windows. In the foreground, a multi-lane highway is visible with long-exposure light trails from cars, showing red and white streaks. A pedestrian bridge with a railing and some greenery runs across the highway. The overall scene is a vibrant urban environment at night.

DEMO

Pronti, partenza, JavaScript

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Stack tecnologico sviluppo TypeScript



- **npm, Bower, Gulp, Karma, Jasmine, ESLint**



- **tsc:** Compilatore TypeScript
 - *tsconfig.json*



- **Tslint:** Linter, code quality, code standards
 - *tslint.json*

TypeScript Declaration File

- **Scrittura manuale:** generazione di un declaration file per l'uso del JavaScript già sviluppato nel codice TypeScript



- **tsd:** DefinitelyTyped (<http://definitelytyped.org/>), repository **github** che raccoglie i **declaration file** delle librerie JavaScript più usate
 - *tsd.json*

A nighttime cityscape featuring several tall skyscrapers with illuminated windows. In the foreground, a multi-lane highway shows long-exposure light trails from cars, with red trails from taillights and white/yellow trails from headlights. A pedestrian bridge with railings and some greenery is visible on the right side of the highway. The sky is dark blue.

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Mamma, devo integrare TypeScript

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Riferimenti

- Node.JS - **<https://nodejs.org/>**
- Bower - **<https://bower.io/>**
- Gulp.JS - **<http://gulpjs.com/>**
- Karma - **<http://karma-runner.github.io/1.0/index.html>**
- Jasmine - **<http://jasmine.github.io/>**
- ESLint - **<http://eslint.org/>**
- TypeScript - **<https://www.typescriptlang.org/>**
- Tslint - **<https://palantir.github.io/tslint/>**
- DefinitelyTyped - **<http://definitelytyped.org/>**

A night cityscape featuring several tall skyscrapers with illuminated windows. In the foreground, a multi-lane highway is visible with long-exposure light trails from cars, showing red and white streaks. A pedestrian bridge with a railing and some greenery is also visible. The overall scene is a vibrant urban environment at night.

Domande?

Materiale su

<http://www.communitydays.it/>

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