



ANGULAR
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INSIDE KNOWLEDGE

I18N with Angular

angular-architects.io

Contents

- Angular Compiler
- ngx-translate



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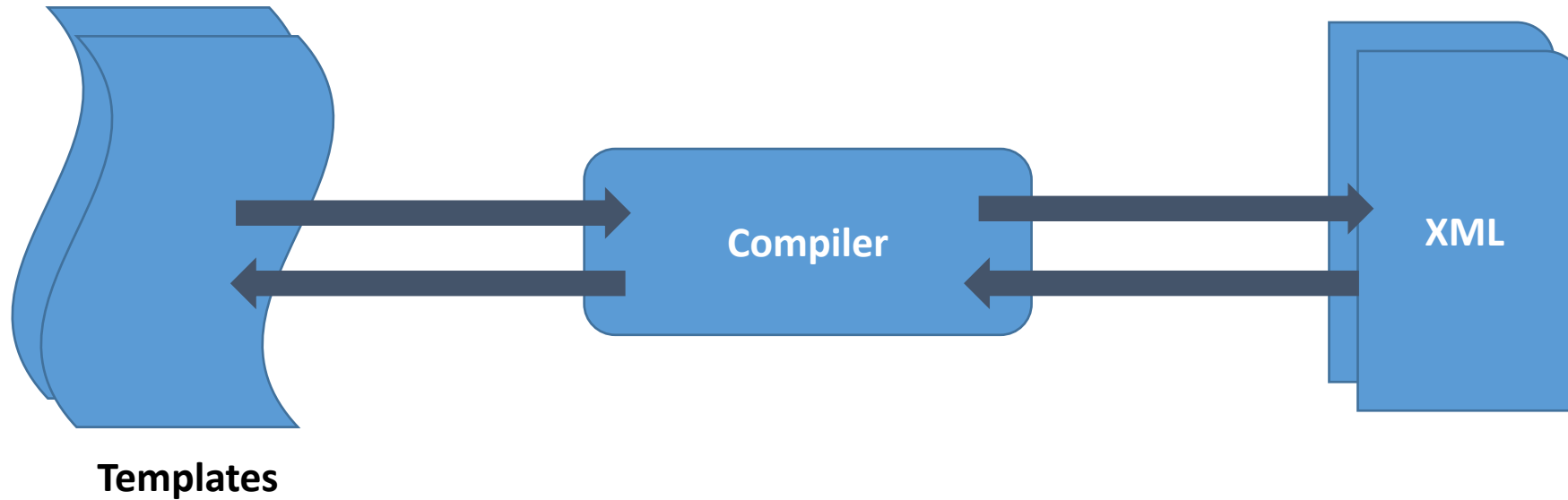
Angular Compiler



Angular Compiler

XML Localisation Interchange File Format (XLIFF, version 1.2)

XML Message Bundle (XMB)



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Angular Compiler

Great
Performance

One Build per
Language

Cannot Change
Language w/o
Reload

Reading Code at
runtime (since
Angular 9)



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Define texts to translate

```
<th i18n>From</th>  
<th i18n="Beschreibung">To</th>  
<th i18n="Bedeutung | Beschreibung">Passengers</th>  
<th i18n="Bedeutung | Beschreibung @passengers">Passengers</th>
```



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Install @angular/localize

```
ng add @angular/localize
```



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Extract texts

```
ng extract-i18n
```



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Angular 9: *angular.json*

```
"i18n": {  
  "locales": {  
    "de": "messages.de.xlf",  
    "fr": "messages.fr.xlf"  
  },  
  "sourceLocale": "en-US"  
},
```

ng build --localize



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Dynamic Translations

```
import { loadTranslations } from '@angular/localize';

loadTranslations({
  'flightSearch.title': 'Bonjour!'
});
```

Can be called several times, e. g. in lazy modles

Texts cannot be changed, once they've been used!

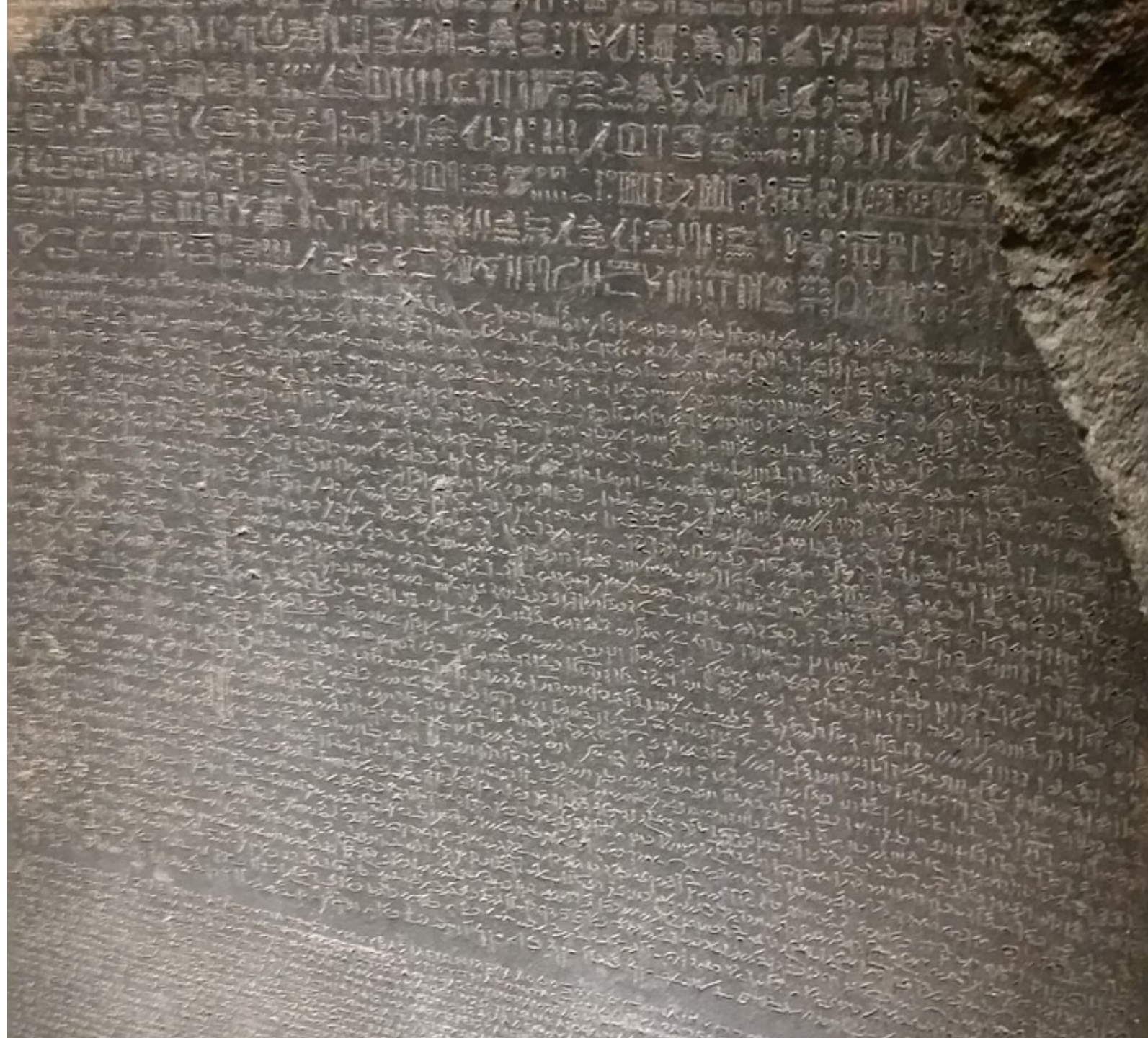


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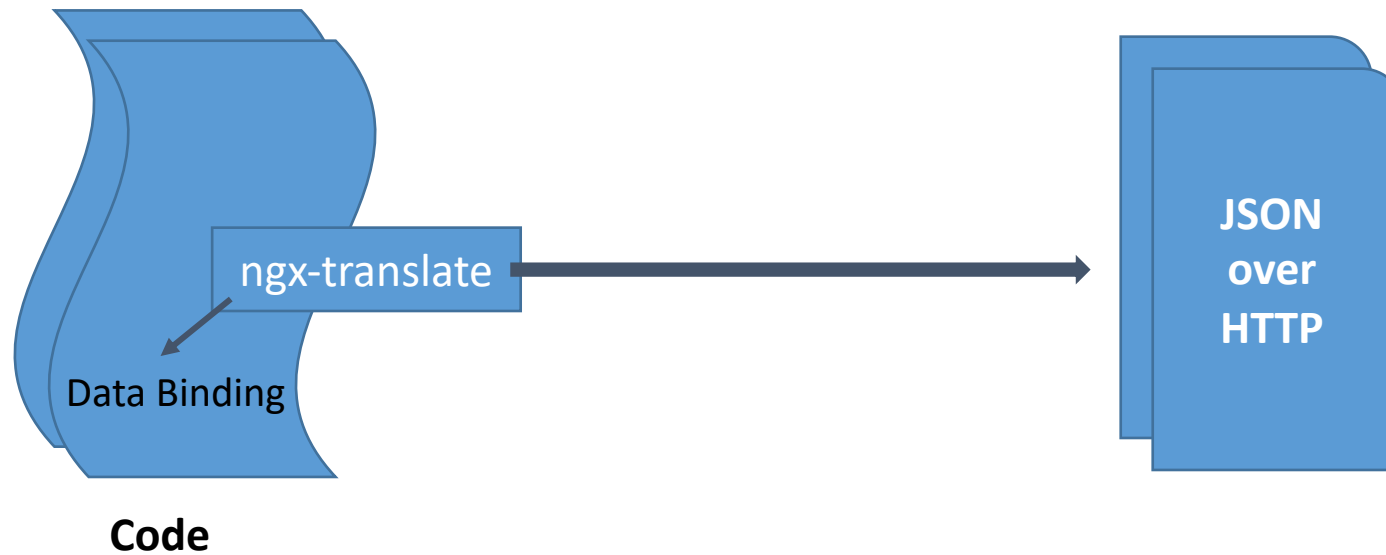


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ngx-translate



ngx-translate



Data format and way of loading are adaptable



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ngx-translate

One Build

Change
Language at
Runtime!

Read
Translations in
Code

Data Binding
Influences
Performance



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Import

```
export function createLoader(http: HttpClient) {  
  return new TranslateStaticLoader(http, './i18n/', '.json');  
}
```



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Import

```
export function createLoader(http: HttpClient) {  
  return new TranslateStaticLoader(http, './i18n/', '.json');  
}
```

```
@NgModule({  
  imports: [  
    TranslateModule.forRoot({  
      provide: TranslateLoader,  
      useFactory: createLoader,  
      deps: [HttpClient]  
    })  
  ],  
  [...]  
})  
export class AppModule {  
}
```



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Initialize

```
this.translate.addLangs(['en', 'de']);  
this.translate.setDefaultLang('de');  
this.translate.use('de');
```



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Resource File

```
{
  "FLIGHTS": {
    "from": "From",
    "to": "to",
    "search": "Search",
    "found": "{{count}} flights found."
  }
}
```



Translation

```
<th>{{ 'FLIGHTS.from' | translate }}</th>
```

```
<th>{{ 'FLIGHTS.found' | translate:{count: 7} }}</th>
```



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DEMO



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Local Formats

Pipes and local Formats

```
{{ flight.date | date:'long' }}
```



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Import format information

```
import { registerLocaleData } from '@angular/common';  
import localeDe from '@angular/common/locales/de';  
import localeDeAt from '@angular/common/locales/de-AT';  
import localeEs from '@angular/common/locales/es';  
  
registerLocaleData(localeDe);    // de-DE  
registerLocaleData(localeDeAt); // de-AT  
registerLocaleData(localeEs);   // es-ES
```



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Define default locale

```
providers: [  
  [...]  
  { provide: LOCALE_ID, useValue: 'de' },  
]
```

Use Formats

```
<p>Datum (Default=de): {{ item.date | date:'long' }}</p>
```

```
<p>Datum (de-AT): {{ item.date | date:'long':'': 'de-AT' }}</p>
```

```
<p>Datum (es): {{ item.date | date:'long':'': 'es' }}</p>
```



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I18N and Inputs?

- Pipes are just for outputs
- Use component lib (like Angular Material)
- General concept: `ControlValueAccessor`

Lab



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Conclusion

Use NGX
Translate



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