Raff Viglianti · @raffazizzi
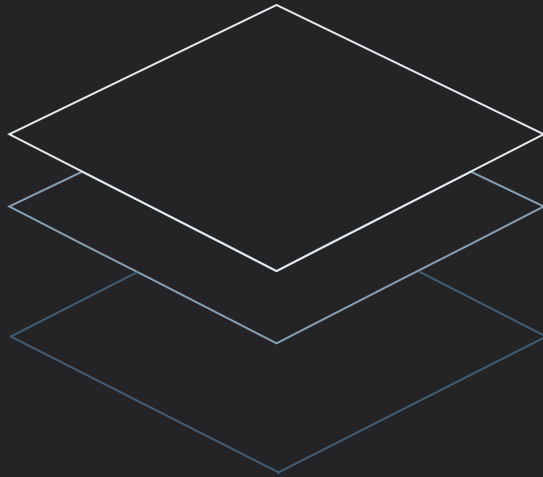
TEI Conference and Members Meeting 2022 - Sept 16

Adapting CETEIcean
for static site building with React and Gatsby

Why focus on front end technology for TEI?

Web publication cannot escape web tech.

Browser UI & UX

○ Server

Static site builder

HTML, CSS, JavaScript (vanilla or frameworks)
  +   assets/media

🐳 CETEIcean: TEI in the browser

Lifecycle

Not SEO friendly

- Fetch TEI (or load string)

- Prepare TEI elements for registration as HTML5 Custom Elements <prefix-elementname>, e.g. <tei-text>

- Register the new elements

- Apply behaviors: JS functions to operate on elements

- Can be styled with CSS

SEO strategy

- Pre-transform TEI (CETEIcean provides an XSLT for this.)

Rely on static site generators to do this step on build

- Gatsby uses React

- "A JavaScript library for building user interfaces"

- Component composition

- State management

- UI libraries are written in React and they can do a lot for you out of the box.

Plugins! Integrate CETEIcean in a modular and reusable way

The plugins

gatsby-transformer-ceteicean

- Prepare TEI elements for registration as HTML5 Custom Elements
  e.g. <tei-text>

- Ingest into Gatsby data layer (GraphQL)

- Apply Node or XSLT/XQuery transformations (more later)

gatsby-theme-ceteicean

- Generate pages from ingested TEI files

- Register new elements as Custom Elements

- Map React Components to TEI Elements
  (ask me about react-teirouter)

Client side (optimized)

Mapping React components to TEI

Demo 1

VI.

What think you I have
taken my pen to record?

Not the battle-ship,Some battleship perfect-
model'd, majestic, that I saw
to day arrive in the offing,
under full sail,

Nor the splendors of the pastAnother note
day—nor the splendors of
the night that envelopes me—
Nor the glory and growth of
the great city spread around
me,

But the two ~~young~~ men I saw
to-day on the pier, parting
the parting of dear friends.

The one ~~who remained~~ to remain hung on
the other's neck and passionately
kissed him—while the one
who departed to depart tightly prest the
one who remained to remain in his arms.

Some city.

- Generated page for a TEI document
- Custom Elements defined
- Some default CETEIcean behaviors applied
- CSS applied

A React component for TEI Pb

Demo 2

VI.

What think you I have
taken my pen to record?

Not the battle-ship,Some battleship perfect-
model'd, majestic, that I saw
to day arrive in the offing,
under full sail,

Nor the splendors of the pastAnother note
day—nor the splendors of
the night that envelopes me—
Nor the glory and growth of
the great city spread around
me,

But the two ~~young~~ men I saw
to-day on the pier, parting
the parting of dear friends.

The one ~~who remained~~ to remain hung on
the other's neck and passionately
kissed him—while the one
who departed to depart tightly prest the
one who remained to remain in his arms.

Some city.

- Mapped a dedicated React component to <pb/>
- Simple DOM operations: attribute lookup
- Custom HTML only for <pb/> (components are isolated)
- Separate CSS
- TEI structure fully available

React component composition
        (popup for note and placeName)

Demo 3

VI.

What think you I have
taken my pen to record?

Not the battle-ship, (1) perfect-
model'd, majestic, that I saw
to day arrive in the offing,
under full sail,

Nor the splendors of the past (2)
day—nor the splendors of
the night that envelopes me—
Nor the glory and growth of
the great city spread around
me,

But the two ~~young~~ men I saw
to-day on the pier, parting
the parting of dear friends.

The one ~~who remained~~ to remain hung on
the other's neck and passionately
kissed him—while the one
who departed to depart tightly prest the
one who remained to remain in his arms.

Some city.

Note 1 X

Some battleship

the great city X

Some city.

- Component composition
- Component reuse
- State management (open / closed)

Real life applications: Scholarly Editing Journal
https://scholarlyediting.org/issues/39/

Demo 4

The train was to leave at seven o'clock and seemed all ready to start, but the porter came in and said: "Well, we don't go until 11 or 12!" "*Why?*" I exclaimed. "Oh we've just heard of a passenger train that is bringing in some more people who want to go to Mexico City!"

That's the kind of schedule they keep here! I dined, went to bed and to sleep before we left, but we didn't get in until one o'clock next day!

San Ángel Inn seemed a Paradise after my week of rain and discomfort. They told me that when the earthquake hit them, the great concrete fountain in the patio here swayed from sided to side splashing the water up in the air and threw all the gold fish out on the ground! But this old stone monastery is so solid it never cracked.

Sunday night, Frank, who had returned from Jalapa in the morning, and I went down to meet Tony and Ida. In the confusion of sorting out the valises at the train and trying to prevent the cargodores from running away with them, I saw a tall, fair

and Mexican papers that he was coming here to look for indian

man standing at one side and tentatively bowing to me when he caught my eye. I recognized him from his photographs which had been in every newspaper here for weeks advertising his arrival. It was Stokowski, the great conductor of the Philadelphia Symphony Orchestra. So I went up to him and he told me he had never forgotten his visit to my place in Taos and had known me because I had joined Tony who was on the train with him. He was just up from Yucatán for a few weeks here and had a letter to me - had already made friends with Ida and Tony. Frank joined us saying he had a letter from John Davey telling him to look out for Stokowski and help him see things. He was very attractive and charming and I invited him to lunch the following Tuesday, and also Tannenbaum and we separated. He had a busy little American woman named Mrs. Payne acting as cicerone for him. I had read in both the American and Mexican papers that he was coming here to look for indian music and I had written Frank Crowninshield (Frank Crownshield) who, it was reported, was coming also, that the only indian music around here was Tony's, so I understood his eagerness to be friends.

Título II. Viajes segundos, después de descubierta la India

[...]

> 11 | ſuceſſos tan notables, i tantos, que algunos le
> tienen por fabuloſo.

[...]

Fernán Méndez Pinto. Historia oriental de sus peregrinaciones, desde el año de 1537 hasta el de 1558, en portugués. Refiere sucesos tan notables, y tantos, que algunos le tienen por fabuloso. Francisco de Andrade corrigió y ordenó esta historia póstuma, y dividida, como se halla, la imprimió 1617. Folio. Licenciado don Francisco de Herrera Maldonado la tradujo en castellano, con una apología en su defensa, en que afecta

> *afectar* 'agregar' (*Aut.*)

mucha noticia de las Indias y de sus escriptores, que se podrá verificar con los que en ella y en un catálogo que pone allí refiere, y en otro, que tiene en su *Epítome historial*. Esta traducción imprimió 1620. Folio.

> 12 | PEDRO TEXERA. Itinerario Oriental, i re-
> laciones de Perſia i Ormuz, con el viage que

[...]

Fray Gaspar de San Bernardino, fransiscano. *Itinerario de la India por tierra hasta el reino de Portugal*, en portugués, impreso 1611, cuarto.

> 13 | ſe pone en ſu lugar. El 3.ª Marruecos i Afri-
> ca. El a a la India Oriental leñan

Applying XSLT (or NodeJS) transformations

Demo 5

```
const {applyxslt} = require('./scripts/applyxslt')                Runs an XSLT with
                                                                   SaxonJS
module.exports = {
 plugins: [
   {
     resolve: `gatsby-theme-ceteicean`,
     options: {
       applyBefore: [(obj) => applyxslt(obj, "notenumbers.sef.json")],   Scripts queue
       applyAfter: [],
       namespaces: {
         "http://www.tei-c.org/ns/1.0" : "tei",
         "http://www.tei-c.org/ns/Examples" : "teieg",
         "http://www.w3.org/2001/XInclude" : "xi"
       }
     }
   },
   {
     resolve: `gatsby-source-filesystem`,
     options: {
       path: `static/tei`,
     },
   },
 ]
}
```

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
    xmlns:xs="http://www.w3.org/2001/XMLSchema"
    exclude-result-prefixes ="xs"
    xpath-default-namespace ="http://www.tei-c.org/ns/1.0"
    version="3.0">

    <xsl:output method="xml" indent="yes"/>
    <xsl:mode on-no-match="shallow-copy" />

    <xsl:template match="note">
        <note xmlns="http://www.tei-c.org/ns/1.0"  n="{count(preceding::note) + 1}" >
            <xsl:apply-templates select="@*"/>
            <xsl:apply-templates select="node()"/>
        </note>
    </xsl:template>

</xsl:stylesheet>
```

Simple XSLT to add note numbers

More complex uses:

- Deal with addSpan / delSpan
- Resolve XIncludes
- ...

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Learn more

Wednesday's Workshop slides:
https://go.umd.edu/StaticTEI22

Demos repository:
https://github.com/raffazizzi/
gatsby-ceteicean-workshop