

SynopsX

A Lightweight Xquery-Based Framework to Easily Publish and Expose XML Corpora

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TEI2015 | October 30, 2015

A lightweight XQuery-based framework...

To easily publish and expose XML corpora

- From data in any XML format (TEI, EAD...)
- To HTML, OAI-PHM, RDF, JSON

A full XQuery web application built upon BaseX

Scalable and easily customizable solution

- templating system
- full control over URI scheme to built RESTfull application

A non-institutionnal collaboration (free software model)

Initiated by the Atelier des Humanités Numériques

- a network of engineers and researchers of ENS Lyon focusing on digital editions

And folks!

- Ampère project, Labex Passés dans le présent, etc.
- all contributors engaged in various digital editions projects

A free software

- published under GNU General Public License >3
- hosted on Github <http://github.com/synopsx>

why SynopsX?

(Human factors)

collaborate

- research by projects
- code quality & best practice

sharing

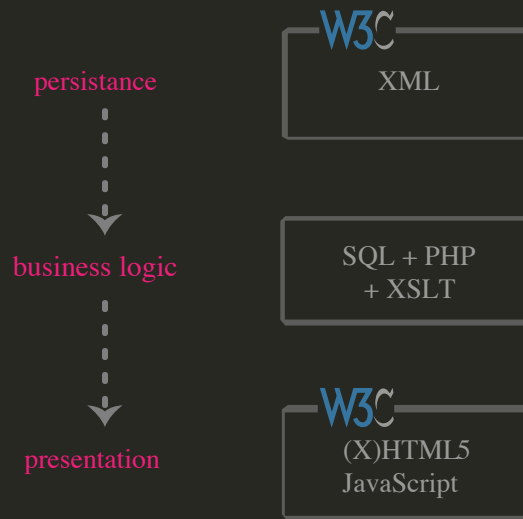
- don't reinvent the wheel
- sustainability

generalize

- maintainability
- reusability

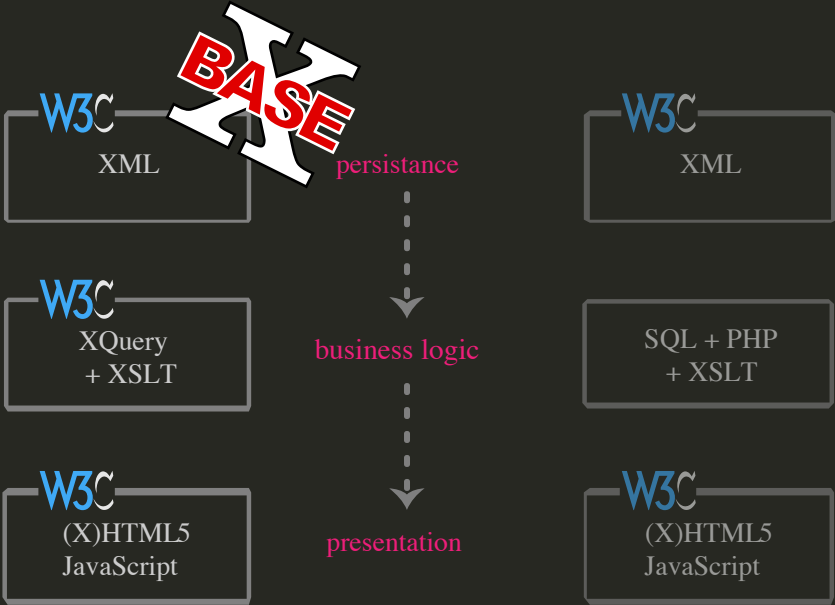
why SynopsX?

Tradition application architecture



why SynopsX?

An uniform XML Stack (a technical choice)



Why an XML database ?

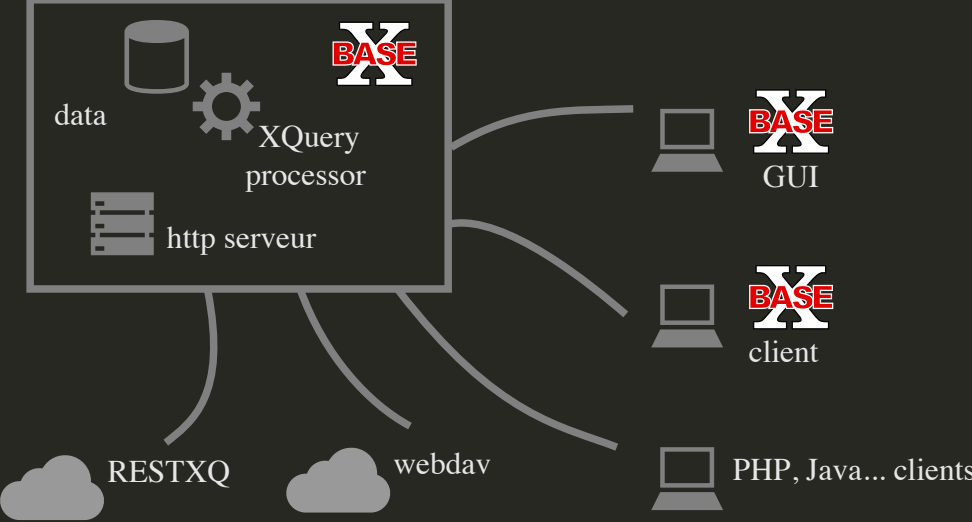
Preserve XML structures

Store XML using Schema specification

Indexing XML data structures

Allow document access throught XML techs (XPath, XQuery, etc.)

The BaseX components and APIs



What is RESTXQ ?

an API for RESTfull webservices

inspired by Java's JAX-RS API

a pre-defined set of XQuery 3.0 annotations for mapping HTTP requests to XQuery functions

What is RESTXQ ?

```
module namespace example = 'http://www.example.com';

declare
%rest:path("hello/{$who}")
%rest:produces("application/xml")
function example:hello($who) {
  <response>
    <title>Hello { $who }!</title>
  </response>
};
```

Development principles

Keep it simple!

- a lightweight framework
- easily accessible

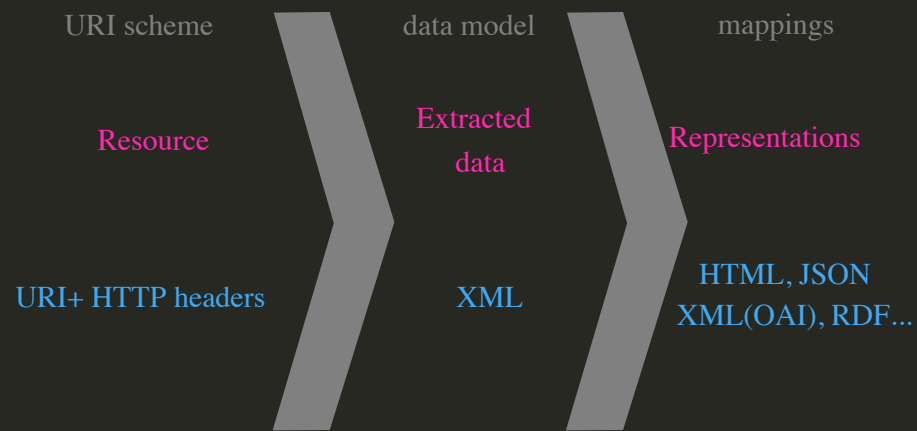
Fully customizable

- user defined resources and representations
- content model liberty (since XML)
- full choice of URI scheme
- user-modifiable inheritance mechanism

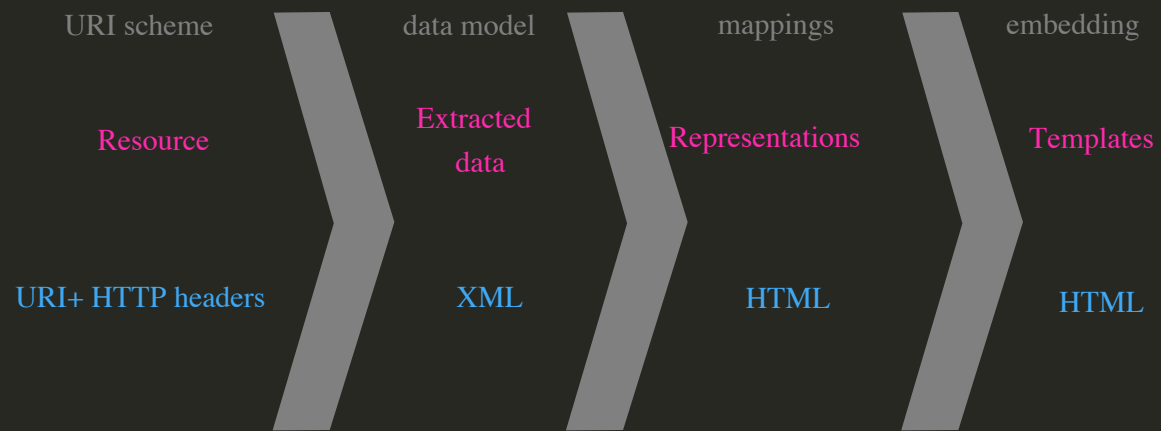
MVC

- separation of content and rendering
- [nearly] full HTML templating mechanism

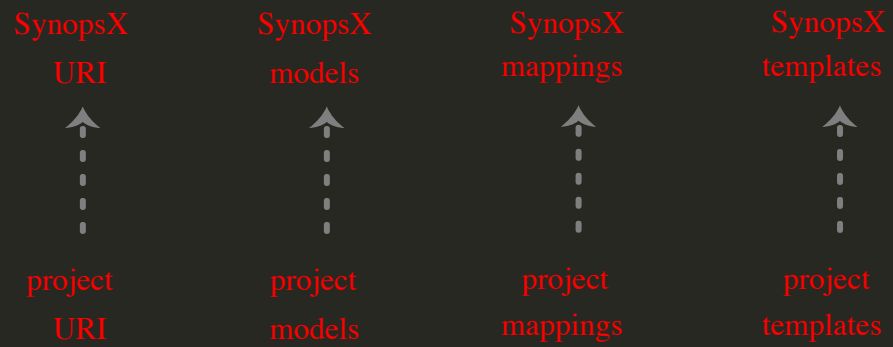
SynopsX transformation chain



SynopsX transformation chain



SynopsX inheritance



summing up

Publishing with a full XML based stack

- generic
- highly customizable

Not only publish but expose

- Build webservices on top of XML data

Working examples on line

<http://editions.ihpc.huma-num.fr/>

OAI example

<http://editions.ihpc.huma-num.fr/hyperdonat/oai?verb=ListSets>

Thanks a lot!

<http://github.com/synopsx>