

Tools for the Digital Diplomatist

Open source tools for online publication of charters

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Introduction

- searchable charter corpus = effective research tool for historians
- creating a digital corpus: highly desirable, complicated, intimidating
- method proposed: **text encoding + visualization software + database software**
- workflow accomplished through use of **open source** tools
- (web server/space to publish on the WWW)

Text Encoding

- to mark-up or not to mark-up
- sticking to simple text: faster path but also a limited one
 - generic search engines → simple searches
 - texts encoded in HTML anyway
- text encoding: slower, more flexible, powerful path
 - XML search engines: complex, powerful searches
 - convert to (X)HTML for web view, PDF for print
 - can be used to perform text analysis
- light encoding schema → enrich it progressively
- wealth of open source XML editors

XML Schemas

- XML schema = ‘grammar’ of encoded texts
- custom made schemas:
 - as simple as one wants
 - no or difficult interchange with other projects
 - everything (f.i. stylesheets) has to be created *ex novo*
- TEI (<http://www.tei-c.org/>) schemas:
 - the current "standard"
 - comprehensive set of schema components (modules)
→ flexible customization
 - well documented (TEI Guidelines)
 - community support (mailing list, wiki, TEI by example)

XML-based Projects

- non TEI:
 - CDLM <http://cdlm.unipv.it/>
 - DEEDS <http://res.deeds.utoronto.ca:49838/research/>
- TEI based:
 - Charters Encoding Initiative <http://www.cei.lmu.de/>
- TEI projects:
 - Éditions en ligne de l'École des chartes (ELEC)
<http://elec.enc.sorbonne.fr/>
 - The Electronic Sawyer <http://www.esawyer.org.uk/>
 - Chartae Burgundiae Medii Aevi
<http://www.artehis-cbma.eu/>
 - Monumenta Germaniae Historica <http://www.dmgh.de/>

TEI Modules for Charter Encoding

- corpus Metadata for Language Corpora
- msdescription Manuscript Description
- namesdates Names, Dates, People, Places
- textcrit Text Criticism
- transcr Transcription of Primary Sources
- (analysis Analysis and Interpretation)
- (figures Tables, Formulae, Figures)
- (gaiji Character and Glyph Documentation)
- [MENOTA Schemas <http://www.menota.org/>]

Future Developments in TEI Land

- absence of a “diplomatic-specific” tag set
- CEI
 - extensions to be integrated with TEI schemas
 - migration through use of XSLT stylesheets
 - see also the Anglo-Saxon Cluster project
- TEI
 - Document / Genetic Criticism module <http://www.tei-c.org/SIG/Manuscripts/genetic.html>
 - why not a SIG?
- just listen to C. Desenclos and V. Jolivet’s paper :)

What About Images

- not a primary goal, but sometimes useful / desirable to include manuscript images
- including the ***transcr*** module in TEI P5 schemas allows to create image-based digital editions or digital facsimiles:
 - global pointer attribute **@facs**
 - element **<facsimile>**
 - element **<surface>**
 - element **<zone>**

<facsimile> Encoding

- linking text and image
 - <facsimile> is a structural element, simplest case: collection of <graphic> elements
 - @facs can be used to link text elements to images
 - for more complex interaction between text and images use <surface> and <zone>
 - <surface> defines the written surface as a rectangular zone
 - <zone> defines a rectangular area on the same cartesian space of a surface element
 - @facs and @corresp link text to image and viceversa

<surface> and <zone>s



Text-Image Linking: *Electronic Junius* (by B. Muir)

The screenshot shows a digital interface for the *Electronic Junius* project. On the left is a photograph of an open medieval manuscript. The top of the image features a red navigation bar with icons for zoom, orientation, and search, followed by the page number "8v-9r". Below the image, the manuscript text is displayed in two columns of Old English. Several words and letters are highlighted with orange boxes, indicating points of interest or annotation. The right side of the interface contains a sidebar with the title "9r - The Advent Lyric 4" and a "Commentary" section. The commentary includes a list of numbered lines from 71 to 91, with some lines partially cut off at the bottom. The lines are in Old English, with some modernized punctuation. A small red "X" icon is next to the title. At the bottom of the sidebar, there is a "Footnote / The Advent Lyric 4 / F74" section with a blue circular icon. Below this, a note states "geryne] Final e is altered from o." To the right of the sidebar, there is a large, magnified image of the word "gejyne" from the manuscript, showing its script and texture.

Commentary
LINES: 71-101

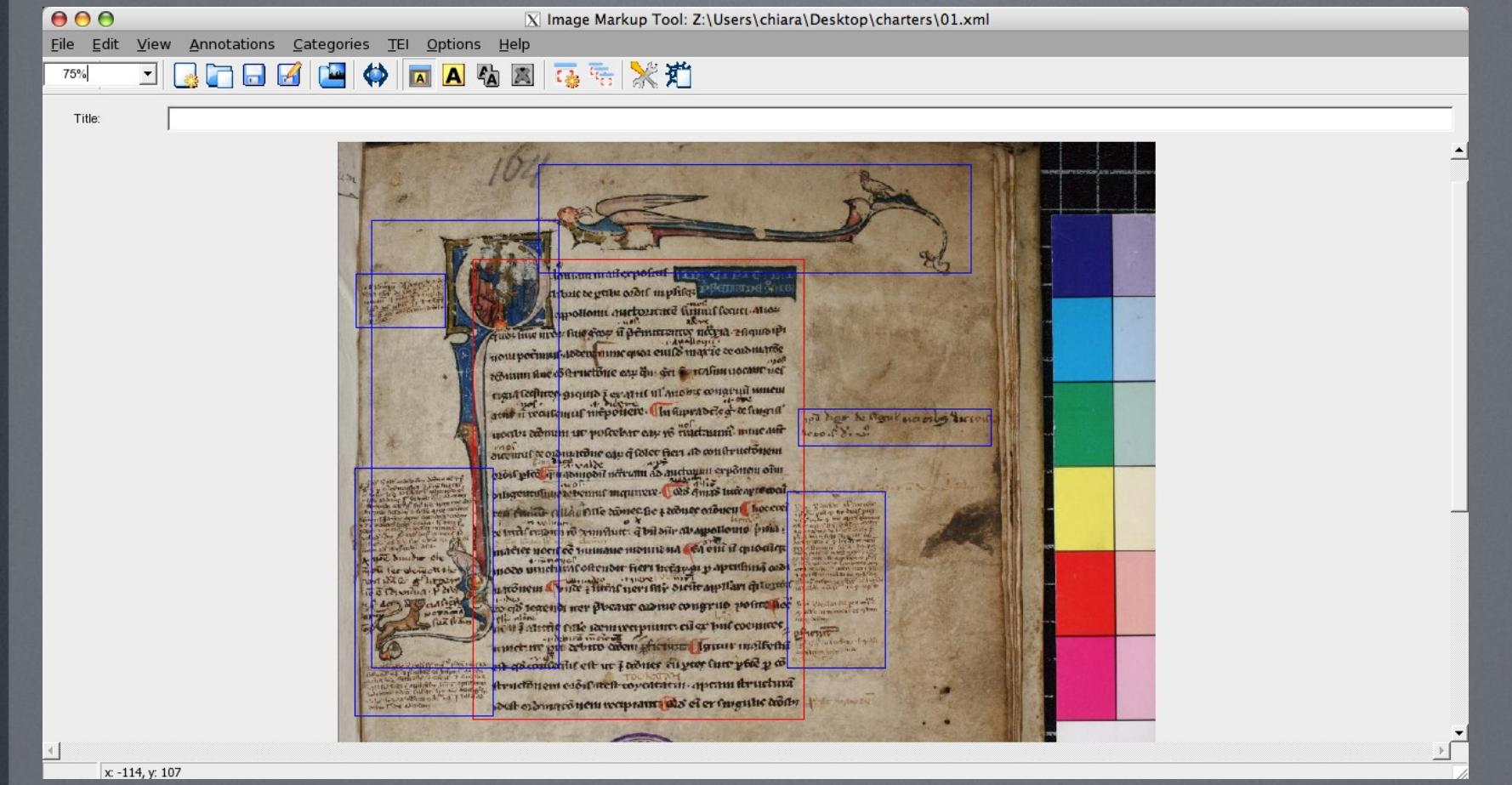
71 "Eala wifa wynn geond wuldres þrym,*
72 fæmme freolicast ofer ealne foldan sceat
73 C þær þe æfre sundbuend secgan hyrdon,
74 arece us þær geryne þær þe of roderum cwom,*
75 hu þu eacnunge æfre onfenge
76 bearnes þurh gebyrde ond þone gebedscipe
77 C æfter monwisan mod ne cuðes.
78 Ne we soðlice swyld ne gefrugnan
79 in ærdagum æfre gelimpan,
80 þær ðu in sundurgife swylice befenge,*
81 ne we þære wyrde wenan burfon
82 toweard in tide. Huru treow in þe
83 weorðlicu wunade, nu þu wuldres þrym
84 biosme gebære, ond no gebrosnæd wearð
85 C mægðhad se micla. Swa eal manna bearn
86 sorgum sawað, swa eft ripað,
87 C cennad to cwealme." Cwæð sio eadige mæg
88 symle sigore full, sancta Maria:
89 C "Hwæt is þeos wundrung be ge wafiað
90 ond geomrrende gehþum mænað
91 sunu Solime somod his dohtor?*
92 Friggað hine fæt he hine þa mannan he gommo minne-
93 geholdo 7 he moðen geƿarpið 7 he mid taref funa ƿon
94 han hat monnum nescið geƿyrne ac ƿiſt onƿa 7 mæda
95 urƿiƿe meðan 7 hat 7 euan ƿyrlo 7 ƿilp ƿyned 7
96 ƿiða 7 ƿonƿam 7 ƿepiƿenad 7 ƿiƿe hæt 7 hað 7 hæt 7
97 onƿam 7 hað 7 nublæ ƿiƿi 7 mot 7 bæm genið 7 ƿiƿum 7 ƿi-
98 ƿum 7 ƿorƿulðe 7 ƿiƿi 7 hæm 7 ƿiƿian angla 7 ƿiƿi 7

Footnote / The Advent Lyric 4 / F74

geryne] Final e is altered from o.

The UVic Image Markup Tool

http://www.tapor.uvic.ca/~mholmes/image_markup/



TILE – Text-Image Linking Environment

<http://mith.umd.edu/tile/>

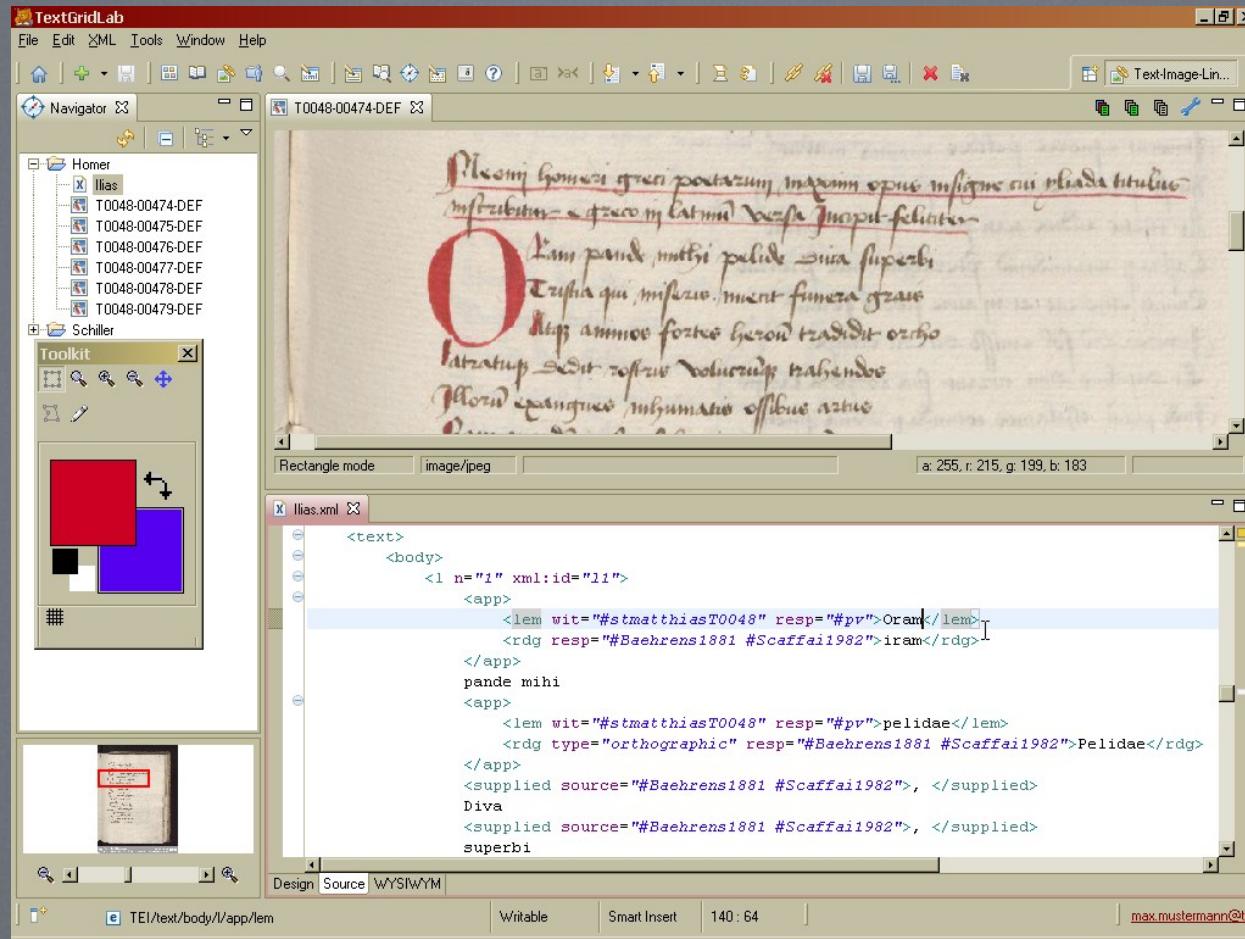
The screenshot shows the TILE software interface. At the top, there is a navigation bar with the TILE logo, "text-image linking environment", "Auto Line Recognizer", "Image Annotation", "Save", "Load", "Documentation", and "version 1.0". Below the navigation bar, the main interface is divided into several sections:

- Transcript Lines:** A list of lines from a poem by Sappho, with a pencil icon for editing.
- Labels:** A field for entering labels.
- Title:** A field for entering the title, currently containing "Title".
- Image Tagger:** A section for managing images, with buttons for "Image Tagger", "List view", and navigation ("Prev", "Next").
- Manuscript View:** A central window showing a photograph of an open manuscript. The left page contains the title "ANACTORIA" and some smaller text. The right page contains the full text of the poem in both Greek and English. The English text is as follows:

My life is bitter with thy love; thine eyes
Blind me, thy tresses burn me, thy sharp sighs
Divide my flesh and spirit with soft sound,
And my blood strengthens, and my veins abound.
I pray thee sigh not, speak not, draw not breath;
Let life burn down, and dream it is not death.
I would the sea had hidden us, the fire
(Wilt thou fear that, and fear not my desire?)
Severed the bones that bleach, the flesh that cleaves,

TextGridLab

<http://www.textgrid.de/en/1-0.html>



Putting It All Together

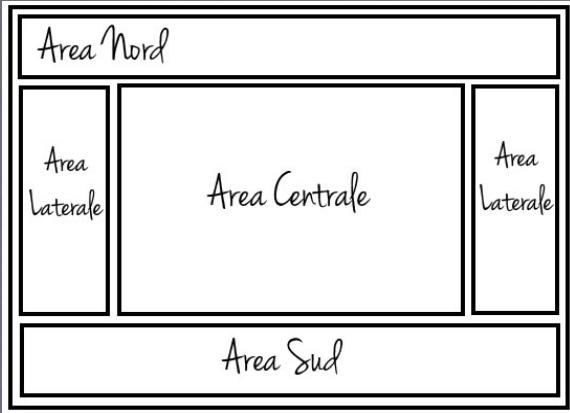
- how to browse text (and possibly images), perform searches of encoded texts?
- solution no. 1: create a web site based on an XML search engine
- solution no. 2: create a web site integrating XML search and other functionalities
- working towards 2 to provide a generic, flexible edition browsing software
- project name: **EVT – Edition Visualization Technology**

What is EVT?

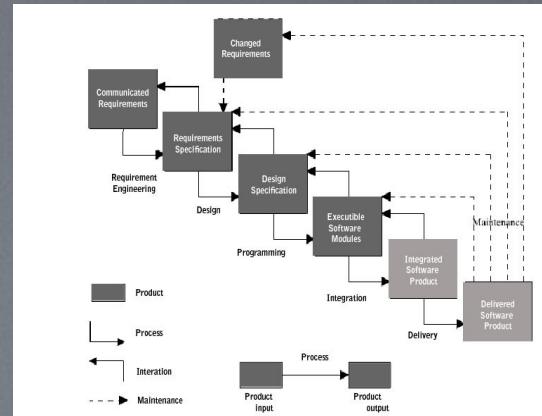
Edition Visualization Technology

“...a complete set of flexible and highly customizable editorial tools developed to allow users to view, read, search and compare editions in an electronic environment.”

Building the EVT: Project Planning

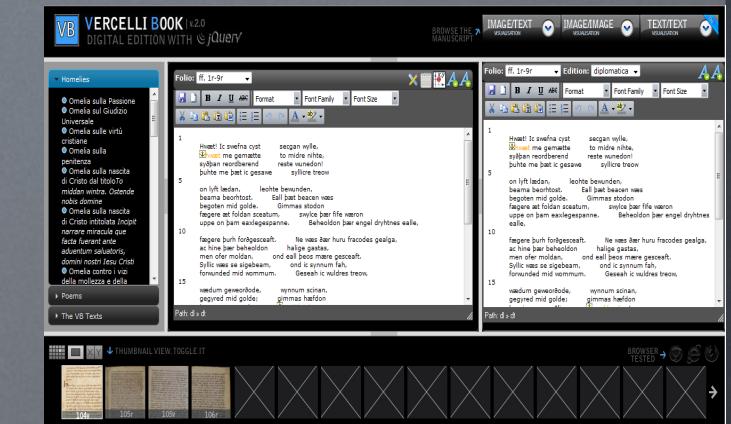


Designing the Gui



Software architecture

Creation of
a prototype



Building the EVT

General Criteria

Human factors (ergonomics)

Consistency (link)

Control and Navigation

Scalability

Aesthetic Integrity

Readability

Specific Requirements

Good hyper-textual functionality

Image manipulation tools

Advanced search functionality

Benefits of XML with regards to visualization

VERCELLI BOOK | v.2.0
DIGITAL EDITION WITH

BROWSE THE MANUSCRIPT IMAGE/TEXT VISUALIZATION IMAGE/IMAGE VISUALIZATION TEXT/TEXT VISUALIZATION

Folio: ff. 1r-9r Edition: diplomatica

Homilies

- Omelia sulla Passione
- Omelia sul Giudizio Universale
- Omelia sulle virtù cristiane
- Omelia sulla penitenza
- Omelia sulla nascita di Cristo dal titolo *To midden wintra. Ostende nobis domine*
- Omelia sulla nascita di Cristo intitolata *Incipit narrare miracula que*

Poems

The VB Texts

Path: dl » dt

1 Hwæt! swefna cyst secgan wylle,
weet me gemætte to midre nihte,
yāpan reordberend reste wunedon!
puhete me þæt ic gesawe syllicre treow

5 on lyft lædan, leohte bewunden,
beama beorhtost. Eall þæt beacen wæs
begoten mid golde. Gimmas stodon
fægere æt foldan sceatum, swylce þær fife wæron
uppe on þam eaxlegespanne. Beheoldon þær engel ryhtnes ealle,

10 fægere þurh forðgesceaft. Ne wæs ðær huru fracode gealga,
ac hine þær beheoldon halige gastas,
men ofer moldan, ond eall þeos mære gesceaft
Sylc wæs se sigebeam, ond ic synnum fah,
forwurded mid wommum. Geseah ic wuldrum treow,

15 wædum geworðen, wædum geworðen, halige gastas,
gegyred mid golde; gimas hæfdon
bewrigene weorðlice wealdendes treow.

1 Hwæt! swefna cyst secgan wylle,
weet me gemætte to midre nihte,
yāpan reordberend reste wunedon!
puhete me þæt ic gesawe syllicre treow

5 on lyft lædan, leohte bewunden,
beama beorhtost. Eall þæt beacen wæs
begoten mid golde. Gimmas stodon
fægere æt foldan sceatum, swylce þær fife wæron
uppe on þam eaxlegespanne. Beheoldon þær engel ryhtnes ealle,

10 fægere þurh forðgesceaft. Ne wæs ðær huru fracode gealga,
ac hine þær beheoldon halige gastas,
men ofer moldan, ond eall þeos mære gesceaft
Sylc wæs se sigebeam, ond ic synnum fah,
forwurded mid wommum. Geseah ic wuldrum treow,

15 wædum geworðen, wædum geworðen, halige gastas,
gegyred mid golde; gimas hæfdon
bewrigene weorðlice wealdendes treow.

Path: dl » dt

THUMBNAIL VIEW. TOGGLE IT BROWSER TESTED

Vercelli Book Digital Edition (using jQuery)

VERCELLI BOOK | v.2.0
DIGITAL EDITION WITH **jQuery**

- ▶ Introduction
- ▶ Help
- ▶ Preferences
- ▶ Layout Management
- ▶ Select Language
- ▶ Bookreader
- ▶ Search

This is an autocomplete research.
Tags:

Folio: ff. 1r-9r

X ACTIVE/DISACTIVE ZOOM

Play Slideshow

< Previous Folio Next Folio >

BROWSE THE MANUSCRIPT

IMAGE/TEXT VISUALIZATION

IMAGE/IMAGE VISUALIZATION

TEXT/TEXT VISUALIZATION

Folio: ff. 1r-9r Edition: diplomatica

Format Font Family Font Size

1

Hwæt! Ic swefna cyst secgan wylle,
syweet me gemætte to midre nihte,
syðban reordberend reste wunedon!
buhte me þæt ic gesawe syllcre treow

5

on lyft lædan, leohte bewunden,
beama beorhost. Eall þæt beacen wæs
begoten mid golde. Gimmas stodon
fægere æt foldan sceatum, swylce þær fife wæron
uppe on þam eaxlegespanne. Beheoldon þær engel dryhtnes
ealle,

10

fægere þurh forðgesceaft. Ne wæs ðær huru fracodes gealga,
ac hine þær beheoldon halige gastas,
men ofer moldan, ond eall þeos mære gesceaft.
Syllic was se siegbeam, ond ic synnum fah,
forwundend mid wommum. Geseah ic wuldres treow,

15

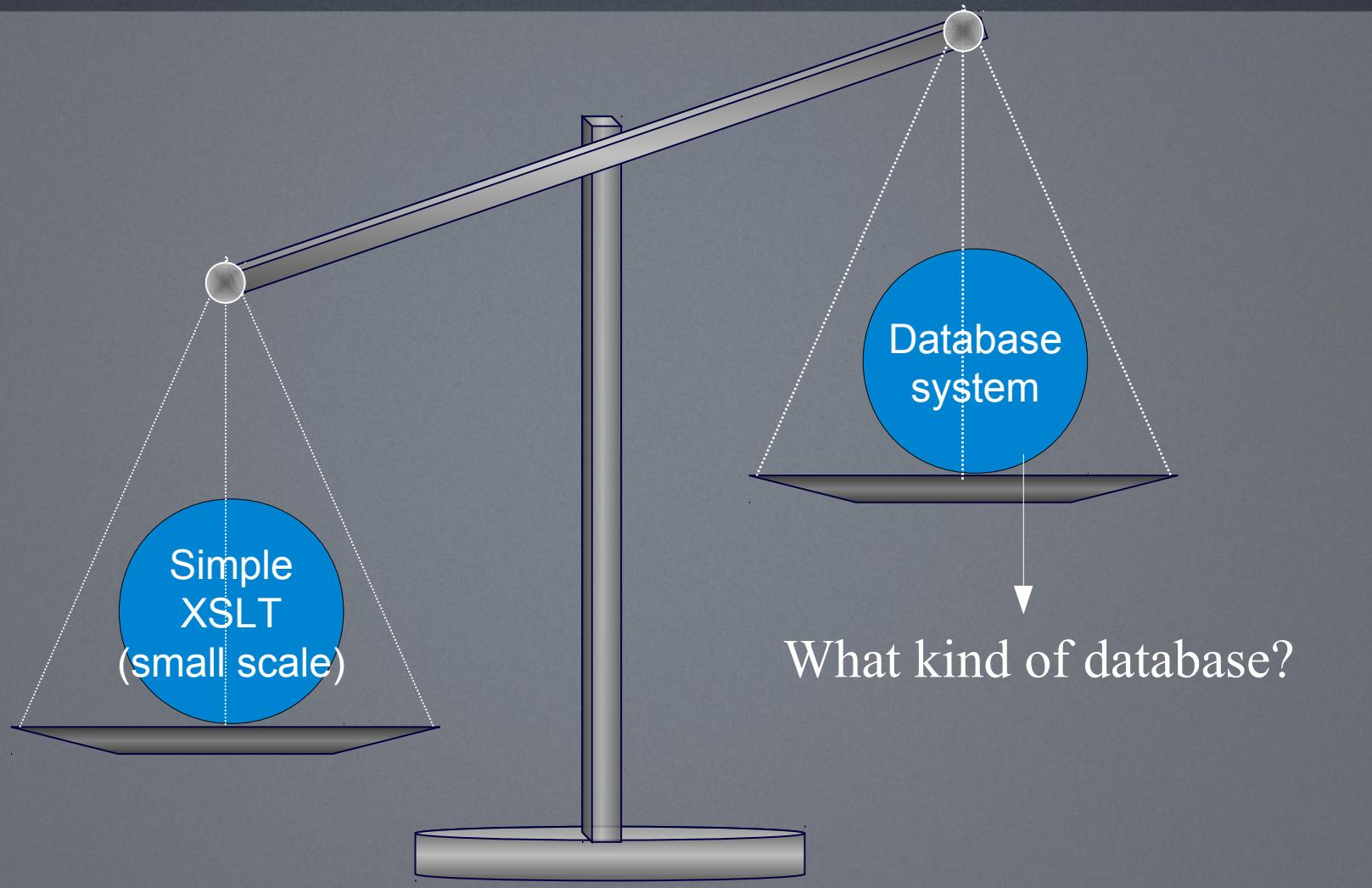
wædum geweorðode, wynnum scinan,
gegyred mid golde; gimmas hæfdon
wealdendes treow.

Path: d1 » dt

BROWSER TESTED →

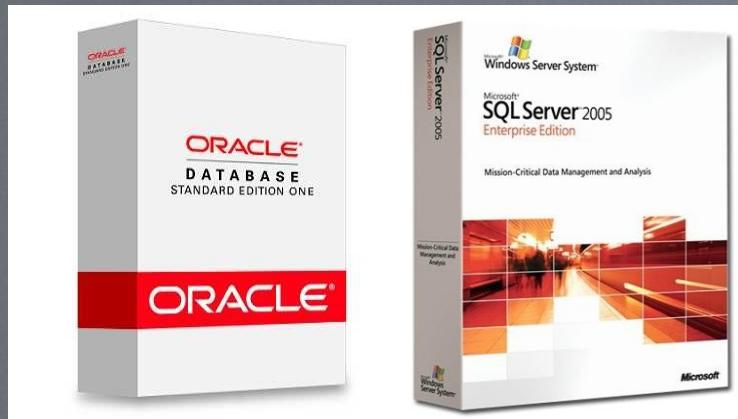
THUMBNAIL VIEW. TOGGLE IT

How to manipulate XML files in EVT?



XML DATA MANAGEMENT SYSTEM

XML-Enabled Database



Native XML Database



1. What are the differences?
2. What kind of Database for EVT?
3. Is there any open source and TEI-compatible software?

1. DATA FORMAT (XML-Enabled Database)

Data Storage



Today much of the data is stored
in relational databases

Application Data

Application

XML

Application

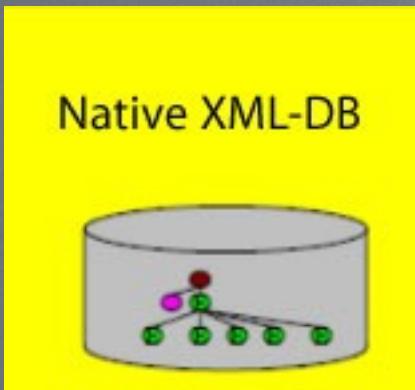
But more and
more applications
use XML as the
format exchange
and data
manipulation.

This creates a problem of compatibility
between storage data and the application data.

1. DATA FORMAT

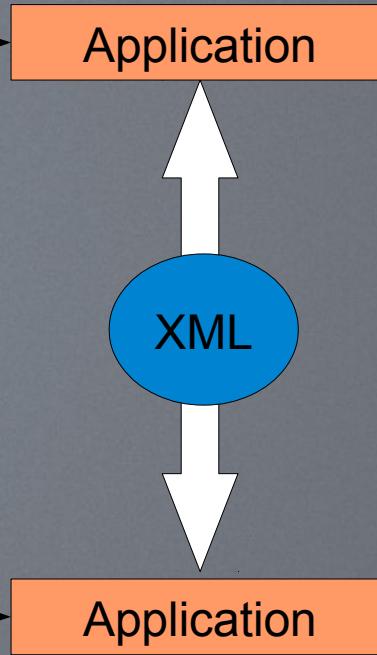
(XML-Native Database)

Data Storage



The fundamental difference between relational data and XML data has led to the creation of Native XML systems

Application Data



XML – Enabled vs Native XML

	XML- Enabled	Native XML
Architecture	Record on tables	XML hierarchical struct. (collections, resources, service)
DTD or Schema	Necessary	Not necessary
Query	SQL	XQuery
XML data	Data-centric	Document-centric
examples	Access2007, DB2	Exist, Xindice

2. What kind of DB (for EVT)?

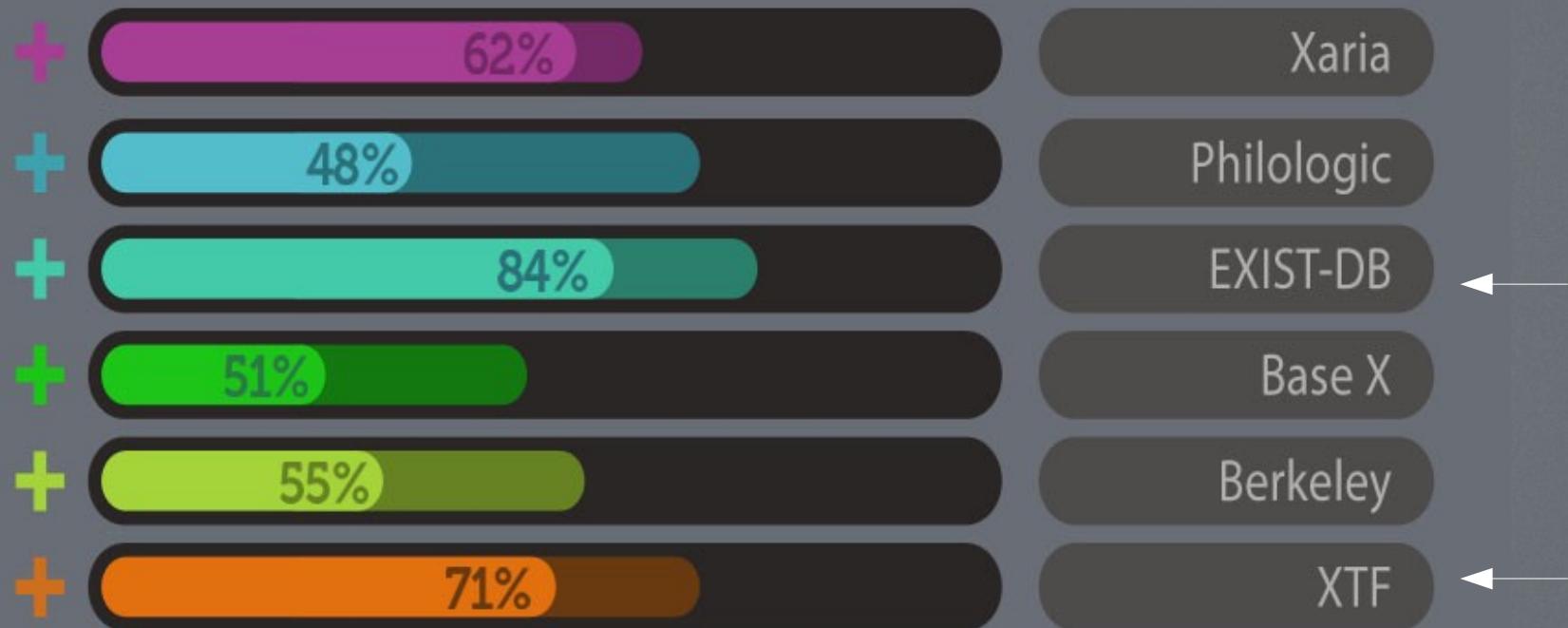
The efficiency of an XML-DB software product can be assessed according to:

- the ability to adapt to documents based on very different schemas.
- the possibility of regenerating XML documents by extracting data from the DB (query).
- the use of query languages (XQuery, XPath).
- the ability to integrate existing data in the XML-DB.

And....

an OPEN SOURCE license

3. Categories of Products: XML-DB Opensource



eXist: Technologies Used

<http://exist.sourceforge.net/>

INTERFACE

- WebDAV
- Javascript+AJAX
- HTML

TECHNOLOGIES

- XQuery
- XPath
- XSLT

The screenshot shows the homepage of the eXist-db website. At the top, there's a navigation bar with links for Home, Download, Wiki, and Demo. To the right of the navigation is a search bar and a news blog section. The main content area features a large "eXist" logo with a blue and orange gradient. Below the logo, the text "Open Source Native XML Database" is displayed. A sidebar on the left contains links for About Us, Who we are, Acknowledgements, Documentation, Quick Start, Function Library, Extension Modules, Main Documentation, Feature Sheet, XQuery WikiBook, Examples, XQuery Sandbox, XML Acronyms, Bibliographic, All Examples, Community, Mailing Lists/IRC, Development, Roadmap, Javadoc, ChangeLog, Bug Tracker, Subversion, Submit Patches, Google Summer of Code, and Administration. The main content area includes sections for Overview, Download (with a prominent orange button), and Community Support. The Overview section discusses the database's support for various web technologies like XQuery 1.0, XPath 2.0, XSLT 1.0, and REST, WebDAV, SOAP, XMLRPC, Atom Publishing Protocol. It also mentions the XUpdate extension. The Community Support section provides information about the mailing lists and IRC channel. On the right side, there's a "Twitter Feed" with recent tweets from the eXist-db team.

XQuery Sandbox

<http://demo.exist-db.org/sandbox/sandbox.xql>

XQuery Sandbox

Home Download Wiki Demo

File

Slots

Paste example: Show countries with decreasin ▾ [Maximize](#)

```
[1] --- empty ---
[2] --- empty ---
[3] --- empty ---
[4] --- empty ---
[5] --- empty ---
[6] --- empty ---
[7] --- empty ---
[8] --- empty ---
[9] --- empty ---
[10] --- empty ---
```

```
for $c in //country[population_growth < 0]
order by $c/name
return
<country>
  {$c/name, $c/population_growth}
</country>
```

[Send](#) [Clear](#) [Check](#) Display: 20 ▾

Execute

Found 15 in 0.001 seconds. << Showing items 1 to 15 >>

1
2
3
4
5
6
7
8
9

Query Result

The screenshot shows the XQuery Sandbox interface. On the left, there's a sidebar titled 'Slots' containing ten empty slots numbered [1] to [10]. The main area has a yellow header bar with a dropdown menu 'Paste example: Show countries with decreasin ▾' and a 'Maximize' link. Below this is a code editor window containing an XQuery script that selects countries with negative population growth, orders them by name, and returns their name and growth rate. At the bottom of the code editor are buttons for 'Send', 'Clear', and 'Check', and a 'Display' dropdown set to 20. A large blue button labeled 'Execute' is centered below the code editor. The result pane below shows the output of the query, stating 'Found 15 in 0.001 seconds.' and listing items 1 through 9. A blue button labeled 'Query Result' is positioned over the result pane.

Configure eXist on Oxygen

The screenshot shows the Oxygen XML Editor interface. The top menu bar includes File, Edit, Find, Project, Options, Tools, Document, Window, and Help. The toolbar contains various icons for file operations, search, and document processing. The left sidebar has sections for Project, Data Source Explorer, and Outline. The Data Source Explorer panel shows a tree view of an 'exist Connection' database named 'db'. Under 'db', there are 'sales' and 'invoices' collections. 'sales' contains 'addresses' and 'companies' sub-collections, with 'addresses_details.xml' and 'companies_details.xml' files respectively. 'invoices' contains several XML files: 'invoice.xsd', 'invoice_AMK3091.xml' (which is selected), 'invoice_ANX1832.xml', 'invoice_BWH9628.xml', 'invoice_DZK3476.xml', 'invoice_FDP7810.xml', 'invoice_HRY1002.xml', 'invoice_JWQ4302.xml', 'invoice_KRS2613.xml', 'invoice_RPX2891.xml', and 'invoice_XCL3211.xml'. The 'system' collection is also listed. The main workspace displays an XQuery script in the 'Untitled1.xquery*' tab:

```
1 declare namespace s='http://www.oxygenxml.com/sales';
2
3     for $invoice in collection('/db/sales/invoices')/s:invoice
4         let $products:=$invoice/s:products
5             for $product in $products/s:product
6                 let $unitCost:= $product/s:unit-cost/text() cast as xs:decimal
7                 let $quantity:= $product/s:quantity/text() cast as xs:integer
8                 let $total:= $quantity*$unitCost
9                     order by $total
10                    return (
11                         <client id="{$invoice/s:customer/s:CompanyID/text()} "
12                             contactName="{$invoice/s:customer/s>ContactPerson/text()} ">
13                             <productID>{$product/s:partNumber/text()}</productID>,
14                             <price>{$total}</price>
15                         </client>
16                     )
17
18
19
20
```

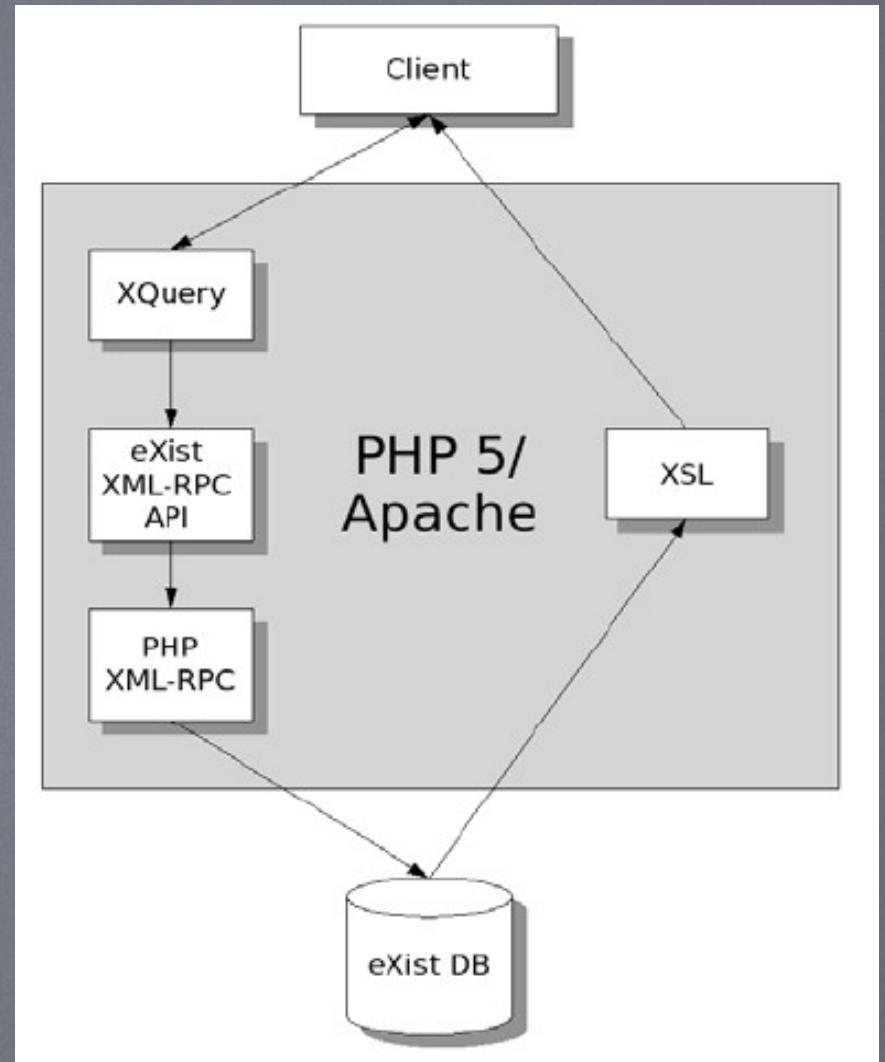
A blue callout bubble labeled "Example Query" points to the XQuery code. Below the workspace is a "Results" pane showing the output of the query:

id	contactName	productID	price
1. 19902563	Linda Anderson	178636	192
2. 31808825	Linda Anderson	178696	415.8
3. 21713500			
4. 805893			
5. 22218065			

A blue callout bubble labeled "Query Result" points to the results table.

eXist-db Architecture

The website runs on PHP 5/Apache and connects to the eXist database through XML Remote Procedure Call.

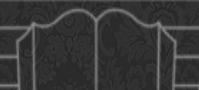


Example of eXist-Based Project

<http://mariage.uvic.ca/>

LE MARIAGE SOUS L'ANCIEN RÉGIME

Accueil
Satire
Gravures
Fiction
Eloges
Tous les documents
Appareil critique
Articles
Index
Bibliographie
Recherche
chercher
Renseignements
Styles



Faire une recherche

Préférences

Genre de texte:

Catégorie d'annotation:

Auteur:

Éditeur / Maison d'édition / Presse:

Lieu de publication:

Date:

Texte à chercher:

MARIAGE

Recherche:

n'importe quel mot

Chercher

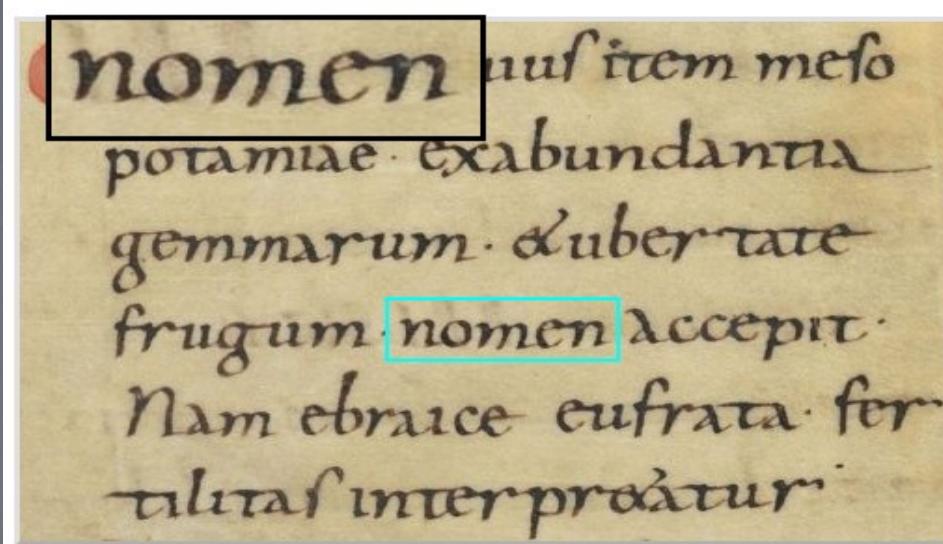
Basic Usage:
the query
may concern
text, author,
date...

En cherchant des mots reliés à un thème (n'importe quel mot, tous ces mots), on peut se servir d'un caractère générique. ? (un point d'interrogation) correspond à aucun caractère ou à un seul, et * (un astérisque) correspond à aucun caractère ou à plusieurs. Ainsi « mar? » correspondrait à « mari » et à « mary », tandis que « mar* » correspondrait à « mari », à « mari », à « marié » et à « mariée ». Une recherche se servant d'un caractère générique ne peut se faire en même temps qu'une recherche « phrase exacte » parce que celle-ci est conçue pour trouver une phrase précise.

Résultats de recherche

Example of eXist-Based Project

Interactive Album of Medieval Palaeography



Advanced Usage:

Select a line
Write on the box
Return from the box

Transcription =

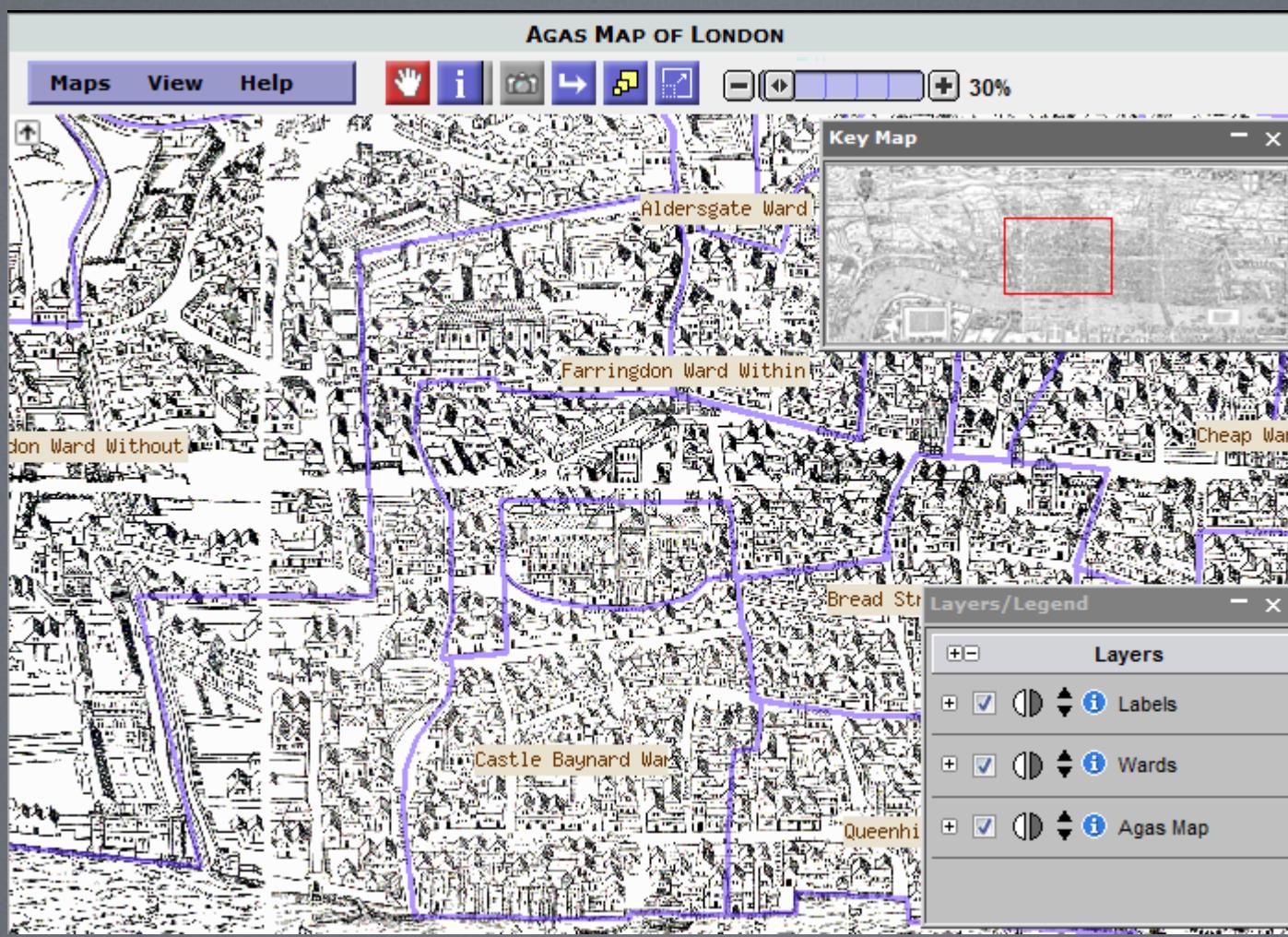
See the [user manual file](#) if you have trouble using this exercise. A double-click on a word in the image displays its transcription.

Ligne 1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Ligne 2	<input type="text"/>	<input type="text"/>	<input type="text"/>	-
Ligne 3	<input type="text"/>	<input type="text"/>	<input type="text"/>	-
Ligne 4	<input type="text"/>	<input type="text"/> nomen <input type="text"/>	<input type="text"/>	-
Ligne 5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<http://ciham.ish-lyon.cnrs.fr/paleographie/index.php?l=en>

Example of eXist-Based Project

<http://www.mapoflondon.uvic.ca/>

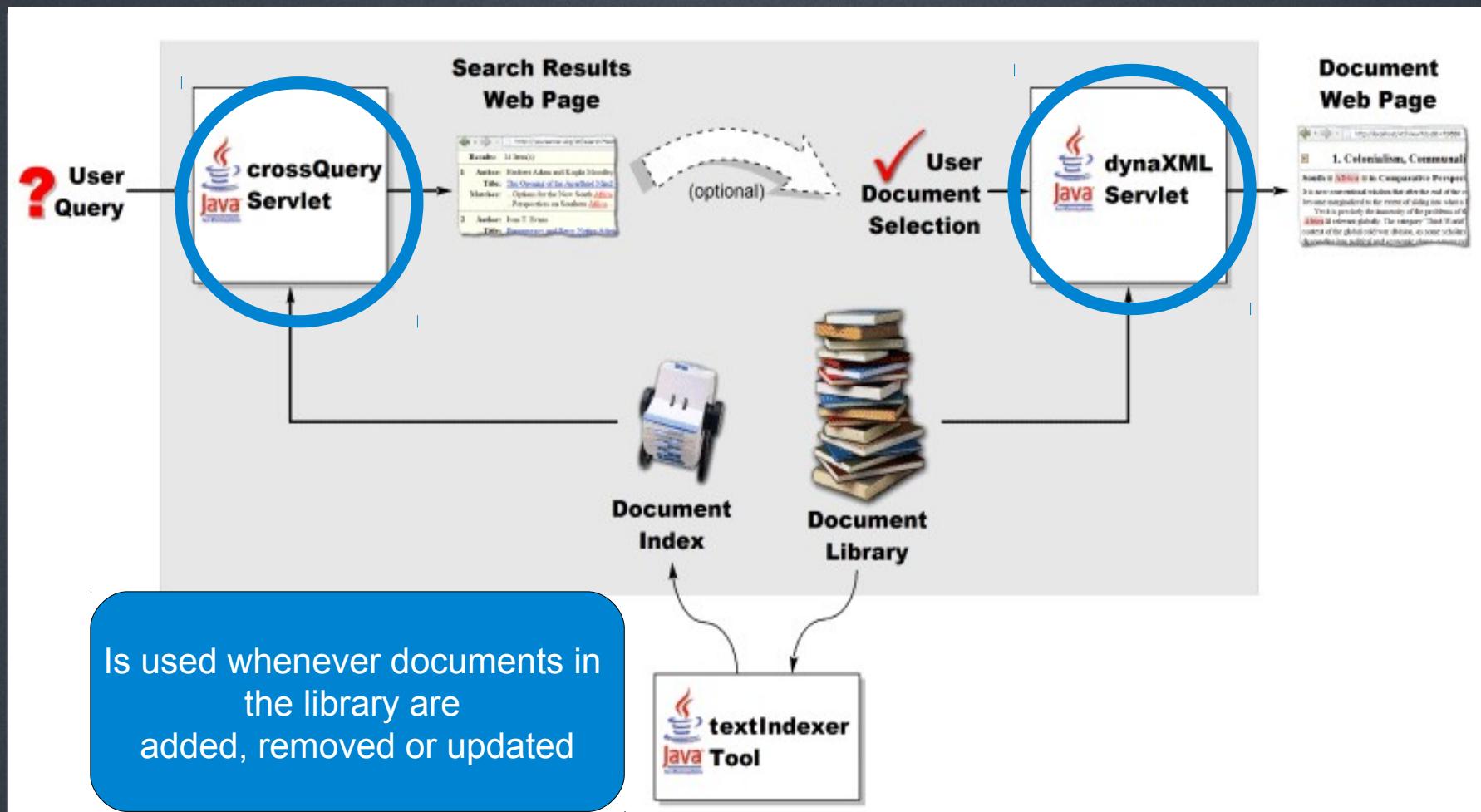


Sample Implementations

- Diary of Robert Graves:
<http://graves.uvic.ca/graves/site/index.xml>
- Opera Liber
<http://193.204.255.27/operaliber/index.php?page=/operaLiber/home>
- The Anglo-Norman Dictionary
<http://www.anglo-norman.net/>
- Early Americans Digital Archives
<http://mith.umd.edu/eada/intro.php>
- Corpus Pieter Willems
<http://ctb.kantl.be/corpora/CPWNL/>
- Sermones.net

XTF - Extensible Text Framework Architecture

<http://xtf.cdlib.org/>



The Architecture of XTF. Developed by CDL

Example of Query on a XTF-based Project

<http://www.marktwainproject.org/>

MTP Search: Letters A.1

Letters Writings Images Biographies

river A.1

All of the words Any of the words A.2

Within all categories
 Text
 Explanatory Notes
 Introductions & Documents
 Textual Apparatus
 Sender
 Addressee
 Place of Origin

Select date range (catalog extends 1813-1962):
between Day Month Year A.3
and Day Month Year

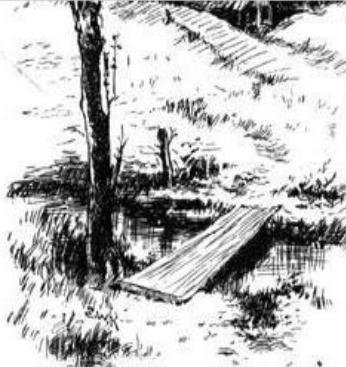
Tip: river* finds riverbank, riverbed, riverboat, etc. To search an exact phrase, include quotation marks, e.g. "Mississippi River".

CLEAR SEARCH

Search individual writings

Search HF: Sawyer C.1
Highlight Hits: On | Off
Go to Page: GO Available: 1-362, 622-54 C.2

Adventures of C.4 Huckleberry Finn
Expand | Collapse
4 Title Page, First Edition



book by the name of "The Adventures of Tom Sawyer," but that ain't no matter.] That book was made by Mr. Mark Twain, and he told the truth, mainly. There was things which he stretched, but mainly he told the truth. That is [nothing.] I never seen [anybody] but lied, one time or another, without it was [�ant] [Polt]

C.3

Search and Browse

Example of Query on a XTF-based Project

<http://www.marktwainproject.org/>

The screenshot shows a search results page for the Mark Twain Project. The top navigation bar includes links for Home, Letters (which is the active tab), Writings, Images, Biographies, About MTPo, My Citations, and a search icon.

The main content area displays a search result for the query "frog". It shows 22 results, with the first few listed below:

Date ▾	Writer ▾	Addressee ▾	Place of Origin ▾	MTP Volume ▾	
24 Jan 1868	Clemens, Samuel L.	Moffett, Pamela A. Clemens, Jane L.	Hartford, Conn.	Letters 1867-1868	text details
15 Aug 1868	Clemens, Samuel L.	Fuller, Frank	Hartford, Conn.	Letters 1867-1868	text details
12 May 1869	Clemens, Samuel L.	Clemens, Olivia L.	Hartford, Conn.	Letters 1869	text details
15 May 1869	Clemens, Samuel L.	Clemens, Olivia L.	Hartford, Conn.	Letters 1869	text details
27 Jan 1873	Clemens, Samuel L.	Simons, Michael L.	Hartford, Conn.	Letters 1872-1873	text details
25 Feb 1873	Clemens, Samuel L.	Bliss, Elisha, Jr.	Hartford, Conn.	Letters 1872-1873	text details
26 Apr 1873	Clemens, Samuel L.	Clemens, Olivia L.	Hartford, Conn.	Letters 1872-1873	text details
23 Mar 1874	Clemens, Samuel L.	Stillson, Jerome B.	Hartford, Conn.	Letters 1874-1875	text details
24 Mar 1874	Clemens, Samuel L.	Aldrich, Thomas Bailey	Hartford, Conn.	Letters 1874-1875	text details
09 Oct 1874	Clemens, Samuel L.	Jennings, Louis J.	Hartford, Conn.	Letters 1874-1875	text details
05 Dec 1874	Clemens, Samuel L.	Unidentified	Hartford, Conn.	Letters 1874-1875	text details

Mark Twain Project - Searching for Objects

Example of a Hybrid Project

<http://www.labibliotecaitaliana.it>

The screenshot shows the homepage of the Biblioteca Italiana website. At the top, there is a navigation bar with links for "Il progetto", "Biblioteca", and "Documentazione". The main content area features a large yellow starburst graphic with the word "Catalogo" next to it. Below this is a search form titled "Ricerca per campi" (Search by fields). It includes dropdown menus for "Autore" and "Titolo", each with an input field and a dropdown menu for "elenco termini" (list of terms) and a "and" operator. There are also buttons for "Help" and "Send request" (Invia richiesta). Below the search form are sections for limiting the search by period (from Origini to 900) and genre. The "Periodo storico" section includes checkboxes for various historical periods: Origini, 200, 300, 400, 500, 600, 700, 800, and 900. The "Genere" section includes checkboxes for various genres: Narrativa, Letteratura teatrale, Documenti, Lettere ed epistolari, Memorialistica, Poesia, Oratoria, Testi storici e storiografici, Traduzioni e volgarizzamenti, and Trattati. At the bottom of the search form, there is a dropdown menu for "risultati per schermata" (results per screen) set to 15, and buttons for "Invia richiesta" and "Azzera". At the very bottom of the page, there is a footer with links to "Scorri il catalogo della biblioteca" (Browse the catalog), "Autori" (Authors), "Periodo storico" (Historical period), and "Genere" (Genre).

**THANK YOU
FOR YOUR TIME**