

# Processing “Computed” Texts

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# TEX & Co.

Usually process texts typed by authors.■

But some texts may be extracted from a larger structure.■

Example: ds.xml, a list of stories available as *pulps* and *pocket books*.■

Very simple version of many actual examples.

# Examples

Available at:

`http://lifc.univ-fcomte.fr/home/~jmhufflen/  
texts/git-2009/`

# Doing it in $(\mathbb{A})\text{T}_{\text{E}}\text{X}$ ?

Theoretically possible, but very tedious in practice. ■

$\text{T}_{\text{E}}\text{X}$ : not suitable for neither handling data bases, ■  
nor functionalities related to programming: e.g.,  
sorting. ■

Complicated markup, complicated definitions.

# XML

Structured texts, like trees.■

Data bases.

# XSLT

Now widely used.■

This operation is actually a transformation of some information.■

The new version (2.0) allows *character maps*  $\implies$   
( $\LaTeX$ ) $\TeX$ 's special characters processed more easily.■

(Example.)

# XSLT: the better choice?

No static checking except if you derive XML texts.■

Balanced braces.■

Balanced environments for L<sup>A</sup>T<sub>E</sub>X:

```
\begin{something} . . . \end{something}
```



## XSLT: the better choice? (con'd)

Such test would be difficult to implement about texts processed by ConT<sub>E</sub>Xt:

`\startsomething ... \stopsomething`

(e.g., `\starttext ... \stoptext`)■

Very partially done in nbst  $\iff$  latex mode.

# XQuery

Less verbose.■

Programming by *templates*, more than *applicative* programming.■

(Example.)

## XQuery (con'd)

Suitable for simple examples, but with the same drawbacks about static checking.■

Many standard features in XSLT—e.g., character maps—are implementation-dependent in XQuery.

# An ‘actual’ programming language

DSSSL was used for SGML texts, but might be suitable for XML texts, especially if many features are related to ‘pure’ programming.■

T<sub>E</sub>X source texts are not directly specified, only *constructs* a DSSSL processor translates to T<sub>E</sub>X.■

(Example.)

# Generating xml-like texts

$\text{XML} \xrightarrow{\text{XSLT}} \text{XSL-FO}$

(Example.)

$\text{\LaTeX}$  users can easily learn XSL-FO, but it is another language.■

FO processors are almost complete, but in progress.

# LuaT<sub>E</sub>X

Tasks related to ‘pure’ programming are *delegated* to external functions written using Lua.■

ConT<sub>E</sub>Xt MkIV allows XML texts to be processed,■  
but has not reached stable state yet;■

it uses XPath-like expressions, but not identical to ‘pure’ XPath’s.

# Point of view

Simple transformation  $\implies$  XQuery.■

More ambitious one  $\implies$  XSLT.■

Keep in touch with FO's processors' progress.■

Scrutinise ConT<sub>E</sub>Xt MKIV's development, ask his team for more development.