

Erfahrung und Vorhersagen für
automatisches
XML-nach-PDF-Publizieren mit T_EX

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Inhaltsverzeichnis

- ▶ Der Kern
 - ▶ galley
 - ▶ T_EXML
 - ▶ CALS Tabellen
- ▶ LTR-RTL
- ▶ Animation
- ▶ Zukunft

Vertikale Abstände

Titel1
Über: 12mm
Unter: 7mm

Titel2
Über: 11mm
Unter: 7mm

Kontrolle am Beginn und Ende

```
\ParaSpaceAbove{12mm}  
{\StilHeadI Titel1}\par  
\ParaSpaceBelow{7mm}
```

```
\ParaSpaceAbove{11mm}  
{\StilHeadII Titel2}\par  
\ParaSpaceBelow{7mm}
```

paravesp.sty, CTAN parades

Kontrollierte Absätze

Das Wort: galley /'gæli/

xgalley: the package, currently distributed as part of the l3experimental bundle, provides control over the boxes that accept material as a page is filled.

Mit Stilen

```
\HeadI{Universal Declaration of Human Rights}
```

```
\HeadII{Preamble}
```

```
\begin{para}Whereas recognition...\end{para}
```

```
\begin{para}Whereas disregard and  
contempt...\end{para}
```

...

```
\HeadII{Article 14}
```

```
\begin{udhrlist}
```

```
\listitem{1}{Everyone has the right ...}
```

```
\listitem{2}{This right may not be invoked ...}
```

```
\end{udhrlist}
```

Vorteile von Galley

- ▶ Vertikale Abstände
- ▶ Registerhaltiger Satz
(== Gitter-Typesetting)
- ▶ 1:1 XSLT
- ▶ Horizontales Material im vertikalen
Modus: `<section id="...">...`

TEXML

```
<cmd name="Headll">  
  <parm>Article 14</parm>  
</cmd>  
<env name="udhrlist">  
  <cmd name="listitem">  
    <parm>1</parm>  
    <parm>Everyone has the right...</parm>  
  </cmd>  
  <cmd name="listitem">  
    <parm>2</parm>  
    <parm>This right may not be invoked...</parm>  
  </cmd>  
</env>
```


Erster Grund für T_EXML

1. Transformation

XSLT: leicht, Python: schwer

2. Schreiben als .tex

- ▶ Sonderzeichen ("`\`", "`%`", "`{`" usw)
- ▶ Syntaxfehler (`\cmdUUUtext`)

XSLT: schwer, Python: leicht

Werkkette

XML \rightarrow T_EXML \rightarrow .tex (Struktur) +
.sty (Formatierung)

```
<xsl:template match="udhr:listitem">
  <cmd name="listitem">
    <parm><xsl:value-of select="1+count(
      preceding-sibling::udhr:listitem)" /></parm>
    <parm><xsl:apply-templates /></parm>
  </cmd>
</xsl:template>
```

```
\listitem{Nummer}{Text}
```

Menschenfreundlich

```
\listitem{  
  2  
  }{  
  Everyone has the right ...  
}
```

VS

```
\listitem{2}{Everyone has the right ...}
```

diff und patch

XML Dokument
V.1.1

Korrekturen

XML Dokument
V.1.2

→ .tex V.1.1

TeX Korrekturen

↓
.tex V.1.1.δ

→ .tex V.1.2

CALS Tabellen

r1c1	r1c2	r1c3	r1c4
r2c1	r2c2	r2c3	r2c4
r3c1	r3c2	r3c3	r3c4

```
\begin{calstable}
\colwidths{{2cm}{2cm}{2cm}{2cm}}
\brow \cell{r1c1} \cell{r1c2}
      \cell{r1c3} \cell{r1c4} \erow
\brow \cell{r2c1} \cell{r2c2}
      \cell{r2c3} \cell{r2c4} \erow
\brow \cell{r3c1} \cell{r3c2}
      \cell{r3c3} \cell{r3c4} \erow
\end{calstable}
```

Herausforderung

a6	b6	c6	d6	e6	f6
a5	b5, c5, d5			e3, e4, e5	f5
a4	b2, b3, b4	c3, c4, d3, d4			f4
a3		c2, d2, e2			f3
a2	c2, d2, e2			f2	
a1	b1	c1	d1	e1	f1

Verbundene Zellen

a5	b5,c5,d5		e3, e4,	f5
----	----------	--	------------	----

```
\brow
```

```
\cell{a5}
```

```
\nullcell{lrb}\nullcell{tr}\nullcell{rtb}  
  \spancontent{b5,c5,d5}
```

```
\nullcell{ltr}
```

```
\cell{f5}
```

```
\erow
```

Zusammenspiel

Article 13

- 1 Everyone has the right to freedom of movement and ...
- 2 Everyone has the right to leave any country, ...

LTR, RTL

www.w3.org/International/articles/inline-bidi-markup/
Inline markup and bidirectional text in HTML

The title is "AN INTRODUCTION TO c++" in arabic.

The title is "C++ مدخل إلى" in Arabic. ✓

Manuell: `\beginR`, `\endR`, `\beginL`, `\endL`

bidirectional automatisch

GNU FriBidi <<http://fribidi.org/>>

```
The title is "AN INTRODUCTION TO c++" in arabic.  
1111111111111111111222222222222  
22222222222333111111111111111
```

FriBidi aus Python, in T_EXML
U+202A, U+202B, U+202C

Animation

- ▶ Video
- ▶ Flash .swf
- ▶ 3D
- ▶ JavaScript

Versuch 1: media9

- ▶ Upgrade
- ▶ Modellierung in XML

Versuch 2: PDF-Schachtel

animation.pdf
PDF-Bild mit
JS/Video/usw

`\includegraphics{animation.pdf}`

Funktioniert nicht.

Nacharbeit

`\includeanimation{animation.pdf}`



PDF mit dem Vorschau-Bild und der Annotation



Python Code basiert auf PyPDF2,
kopiert die Animation aus der
Schachtel in die PDF.

Mögliche Zukunft

- ▶ Alternative zu XSL-FO
- ▶ Sprachen-Mischung (bidi, Schriften)
- ▶ Sonderzeichenfreier Code
- ▶ Direkte Makroanrufe
- ▶ TeX zum Einbetten
(LuaTeX ohne Lua)

Zusammenfassung

XSL-FO vs mit T_EX

- ▶ T_EX kann alles
- ▶ und mehr
- ▶ Weiterentwicklung ist erwartet

Empfohlene Technik:
galley, T_EXML, CALS Tabellen