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Born 1394-99 died 1467-1468

# Erlguten

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# Erlguten

Erlguten is a system for high-quality typesetting

Goal: Better than TeX

Erlguten is work in progress

Erlguten was written by

Joe Armstrong

Michael Karlsson

Sean Hinde

## Motivation

TeX does not like absolute positioning

WYSIWYG isn't

Most systems get kerning wrong

No systems do advanced kerning and layout

Gutenberg was right

Digital typography has made things worse not better



Too tight

Too tight



Too loose

Too loose

This is what open  
office did - it's  
wrong the bounding  
boxes are disjoint

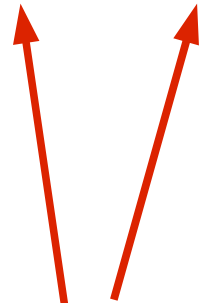


About right

# Motivation

The thesis bug

[51] Håkan

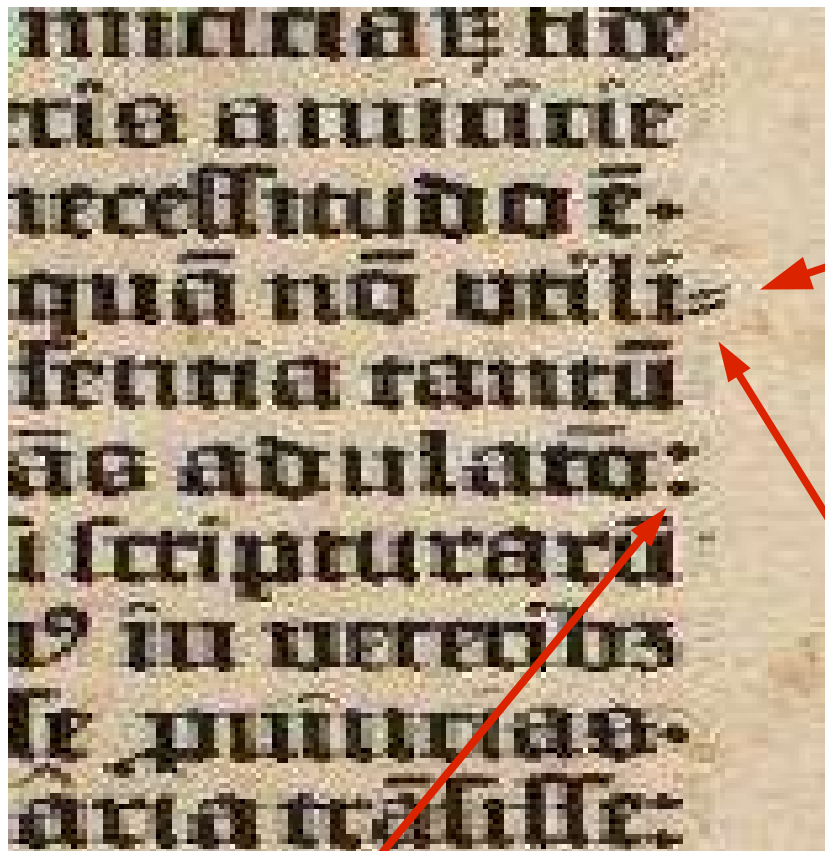


These are different a's  
Times Roman and Baskerville

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- [50] B. Martin and B. Jano (Eds). Wap binary xml content format, june 1999. <http://www.w3.org/tp/wbxml>. 1999.
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- [52] J. Myers and M. P. Rose. Post office protocol - version 3. RFC 1939, Internet Engineering Task Force, May 1996.
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# Gutenberg 42 line Bible c. 1450



Optical alignment



Non-overloaded hyphen. This practise was discontinued by Claude Garamond in c. 1545.



# Goals

Easy to use - simple textual input

Multi-mode inputs (suited for technical reports, magazine layout and presentations)

Very high quality layout engine (better than TeX, in-design, quark etc.)

# Technical

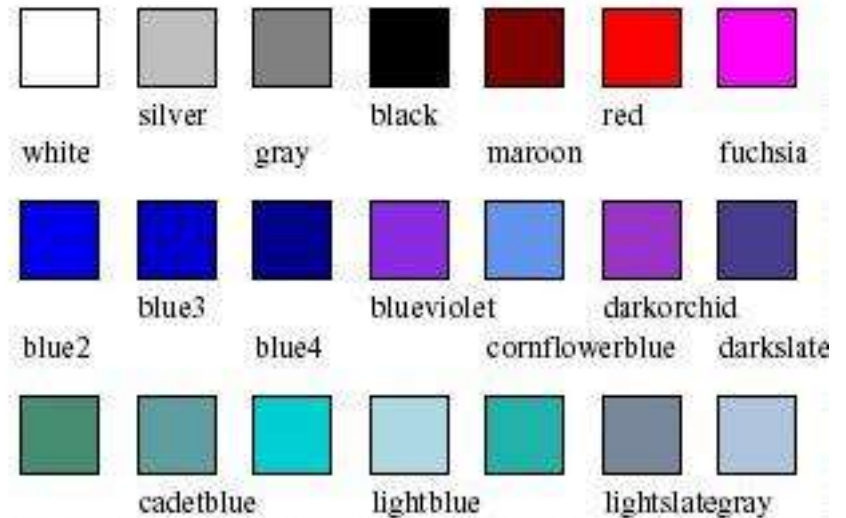
Pure Erlang

Uses only the in-built PDF fonts

Implement "microtypographic techniques in the HZ program"  
(margin kerning, optical alignment of margins, kerning and tracking adjustments to text)

# pdf.erl (mikael)

```
colortest1(PDF,N,[[]])->
    [];
colortest1(PDF,N,[H|T])->
    pdf:set_fill_color(PDF,H),
    pdf:rectangle(PDF,{0,20},{20,20}),
    pdf:path(PDF,fill_stroke),
    pdf:set_fill_color(PDF,black),
    pdf:begin_text(PDF),
    pdf:set_font(PDF,"Times-Roman",8),
    pdf:set_text_pos(PDF,0,(N rem 2)*10),
    pdf:text(PDF,atom_to_list(H)),
    pdf:end_text(PDF),
    pdf:translate(PDF,30,0),
    colortest1(PDF,N+1,T).
```





# DOCBOOK Light (Sean)

```
<section1>
  <title>Erlguten</title>
  <para>Erlang based applications
  ...
  <code>
app_name/src/
    /priv

<list>
  <item>
    <code>src</code> contains
```

---

## 1 Erlguten

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Erlang based applications have a structure defined by Erlang from an Ericsson supplied runtime system and set of standard applications supplied by Ericsson (including as a result by T-Mobile or 3rd parties. Regardless of the origin of all systems.

All code for each individual OTP Application is structured according to the OTP directory structure:

```
app_name/src/
    /priv/
    /doc/
    /ebin/
    /vsn.mk
```

- `src` contains all Erlang source code files (also `Emakefile.src` files)

# ML9 (Joe)

Simple data structures

```
<tag1 name="joe" date="2004-10-11">  
  <list>  
    <item>  
      <code>src</code> contains  
      ...  
    </item>  
    ...  
  </list>  
</tag1>
```

```
@tag1 {name={"joe", "armstrong"},  
       date={2004, 10, 11}}
```

```
* 'src' contains
```

Complex Data structures

# ML9

```
@autoexec {mod="handler"}
@erlang
-module(foo) .
...
@doc {keywords=[code,doc]}
This is 'very nice' because:
* it's 'easy' to learn
* easy to type
@java
import java.applet.*;
public class Foo extends Applet {
    private boo=0;
@makefile name="Makfile"
.SUFFIXES .erl.beam
...
```

← Run handler on this file

← Erlang text

← Wiki text

← Java

# Magazine production (Joe)

```
@autoexec {mod="pdf"}
@include "magazine"
@heading This page tests
justification routines
@leftBox
This is normal text with no
emphasised code.
...
@image "bikes.jpg"
```



```
@grid {page=a4,dx=20,dy=20}
@box {name="heading",x=1,y=1,
color="yellow",face="TimeRoman",
pointSize=24,justification=left}
@image {x=2,y=3}
```

The image shows a page layout on a grid. At the top, a yellow box contains the text "This page tests justification rou". Below this, a photo shows a person standing between two motorcycles. To the right of the photo, a grey box contains the text "T amn exan". Below the photo, an orange box contains the text "This is normal text, with no emphasised code, the next example will be more complicated. This example is just simple text. In the next example I will show some text with emphasis." To the right of the orange box, a light blue box contains the text "This is row box set in Times-Roman for printing le row newspaper c tually looks pr set in wide m is set narrow a really catastroph Times-Roman". The grid has vertical lines at x=25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300, 325 and horizontal lines at y=575, 600, 625, 650, 675, 700, 725, 750, 775, 800, 825.

# Status

It works but ...

Unstable (I keep re-writing it)

Taking a lot longer than I expected

(Knuth "paragraph justification is really difficult") (most programs get it wrong!)

Fun

Needs integrating with ex11