A METAFONT for Rustic Capitals

Victor Sannier
GUTenberg Association

TUG 2023
The French-speaking Group of \TeX Users (GUT) aims to promote the use of \TeX and \LaTeX by helping people to discover and use them.

https://www.gutenberg-asso.fr/
What are Rustic Capitals?

Quick summary [Bib03]:
- Earliest examples: 1st century CE (election posters in Pompeii)
- Regularisation: 4th and 5th centuries
- Titles and distinctions: 9th and 10th centuries
Our main source: the *Vergilius Vaticanus* manuscript\(^1\)

\(^1\)https://digi.vatlib.it/view/MSS_Vat.lat.3225
Our goal with this METAFONT

Olocco and Patanè [OP22] define a spectrum of type revivals:

perfect reproduction   recreation
Our goal with this METAFONT

Olocco and Patanè [OP22] define a spectrum of type revivals:

perfect reproduction

the rc typeface

recreation
Character height

After numerous measurements on various fragments of the manuscript:

\[ u\# := \frac{1}{12} \times 10 \text{ pt}\#; \% \text{ unit} \]
\[ \text{cap\_height}\# := 9 \text{ u}\#; \]
\[ \text{asc\_height}\# := 11 \text{ u}\#; \]
\[ \text{desc\_height}\# := 1 \text{ u}\#; \]
\[ \text{crossbar\_height}\# := 5 \text{ u}\#; \]
Variables and macros

Virtual pen

```
thick# := 5/4 u#;
thin# := 1/3 u#;
pen_angle := 65; % 90 - 35

pickup pensquare
  xscaled thick
  yscaled thin
  rotated pen_angle;

rustic_pen := savepen;
```
The draw_serif macro

def draw_serif(suffix i, j)(expr width) =
    rt x.j - lft x.i = width;
    y.i = y.j;
    draw z.i{dir serif_angle}
        .. {dir serif_angle}z.j;
enddef;
The `draw_diag_stroke` macro

def draw_diag_stroke(suffix i, j)(expr a) =
    z.i - z.i.l = z.j.r - z.j
    = spur_width * dir spur_angle;
    z.j - z.i = whatever * (dir a);
    draw z.i.l .. z.i
    .. tension 3
    .. z.j .. z.j.r;
enddef;
A few ligatures

ligtable "A": "T" kern -u#;
ligtable "K": "O" kern -.5u#;
ligtable "L": "T" kern -u#;
ligtable "R": "O" kern -.5u#;
...

\Lambda T
Earlier work on rustic capitals

Wilson
Landers
Earlier work on rustic capitals

Wilson
Landers
Sannier
Comparison with other typefaces

Victor Sannier GUTenberg Association

A METAFONT for Rustic Capitals

TUG 2023
Comparison with other typefaces

LACRIMASQUE

LACRIMASQUE

LACRIMASQUE
Comparison with other typefaces

LACRIMASQUE

LACRIMASQUE

LACRIMASQUE
Comparison with other typefaces

UNDEGENUSDUCIS
UNDEGENUSDUCIS
The Aeneid

ARMAUIRUMQUECANTROIAEQUIPRIMUSABORIS
ITALIAMFATOPROFUGUSLAUINIAQUEUENIT
LITORAMULTUMILEETTERISIAMACTATUSETALTIO
UISUPERUMSAEUAEMEMOREM1UNONISOBIRAM
Future work

- iterate on the shapes of a few characters,
- consider your suggestions,
- submit the typeface to the CTAN
Future work

- iterate on the shapes of a few characters,
- consider your suggestions,
- submit the typeface to the CTAN
- design more characters
- further rationalise the design
Future work

- iterate on the shapes of a few characters,
- consider your suggestions,
- submit the typeface to the CTAN
- design more characters
- further rationalise the design

THANK YOU
References
