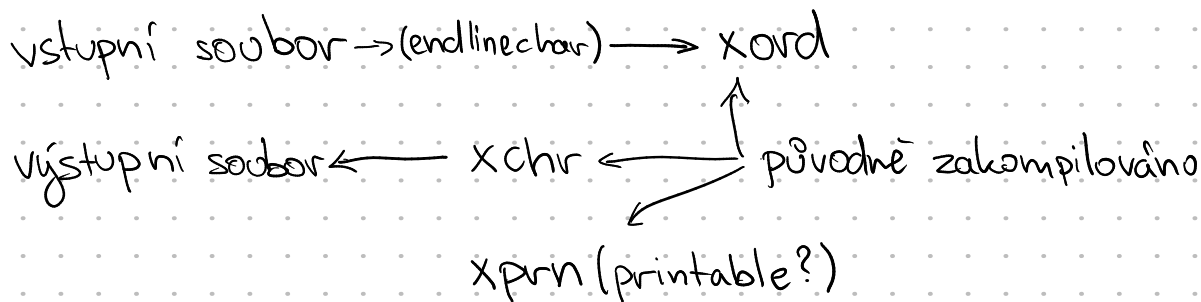


# Typografie

## kódování textu



$\hookrightarrow$  enc<sub>TEX</sub> (olšák)

- + \wordcode x=y
- + \xchrcode x=y
- + \xprncode x=y

nová verze

$\backslash$ mubyte <int> [L] x<sub>1</sub>...x<sub>n</sub> \endmubyte

$\backslash$ cs

$\backslash$ cs#k

$\uparrow$  vloží makro a hod' k bytů  
jako jeho parametr

$\backslash$ mubyte in = 0, 1

out = 0, 1, 2, 3  $\leftarrow$  i řídicí sekvence

log = 0, 1, 2, 3  $\leftarrow$  + se neexpandují

## ε-TEX

- 32768 registrů

- mnoho trasovacích přepínačů

-  $\backslash$ showtokens{...}  $\rightarrow$   $\backslash$ showtokens\ea{jobname}

-  $\backslash$ currentgrouplevel,  $\backslash$ cg.type,  $\backslash$ astnodetype

-  $\backslash$ fontcharwd (fnt <char>)

-  $\backslash$ iffontchar

-  $\backslash$ numexpr 1+3 \count7 \relax

-  $\backslash$ dimexpr (2pt - \parskip) \* \numexpr 3-11/7 \relax + 3pt \relax

-  $\backslash$ gluestretch <glue>  $\rightarrow$  dimen

$\hookrightarrow$  order <glue>  $\rightarrow$  0-3

- \mark → \marks  $\mathbb{N}$   
- \topmark → \topmarks  $\mathbb{N}$

- \unexpanded{ }

- \scantokens{ }

- \detokenize{ }

- \lastlinefit = %0 (roztáznost z předposledního do posledního řádku)

- \clubpenalties = n  $p_1 \dots p_n$

- \widowpenalties

- \interlinepenalties

- \middle  $\{ 2x \mid x \in \mathbb{N} \}$

- \ifdefined lcs

- \ifcurname... \endcurname

- \unless \if

- \protected - toto \def při writu neexpandovat

etex.src → upravený plain

## pdfTEX

- \pdfoutput = 0/1

- \pdfpagewidth, height

- \pdfhorigin  
↓

- \pdfminorversion 1.x

- \pdfcompresslevel 0-9

- \pdfobjectcompresslevel

\* PDF umí měnit doporučenou transformaci stránky v prohlížeči

\* qpdf umí decompress

# Metafont

- programovací jazyk na tvorbu fontů

## Tokenizace

- tři tokeny - písmena, čísla, ostatní

- čísla - 1d.1d

- řetězce "..."

- (); - token sám o sobě

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ_abcdefghijklmnopqrstuvwyz
<=>:|
'
+-
/*\
! ?
#&@$
~
[
]
{}
.
, ; ( )
"
0123456789
%
```

(see rules 1, 3, 6)  
(see rule 5; these characters are "loners")  
(see rule 4 for details about string tokens)  
(see rule 3 for details about numeric tokens)  
(see rule 2 for details about comments)

## Proměnné

- boolean, representing the values 'true' or 'false';
- string, representing sequences of ASCII characters;
- path, representing a (possibly curved) line;
- pen, representing the shape of a pen nib;
- picture, representing an entire pattern of pixels;
- transform, representing the operations of scaling, rotating, shifting, reflecting, and/or slanting;
- pair, representing two numbers (e.g., a point or a vector);
- numeric, representing a single number.

$$a + t b = \sqrt{a^2 + b^2}$$

$$c - - d = \sqrt{c^2 - d^2}$$

$$[a, b]$$

$$y_8 = .5[h, -d]$$

Point 8 should be halfway between the top and bottom edges of the type.

všechno se definuje jako rovnice  
neprocedurálně

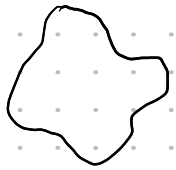
whatsoever

# Barevné profily

/DeviceGray, /DeviceRGB, /DeviceCMYK

/DeviceRGB CS cs  
 $x_1 \dots x_n$  SC sc  
 ↑ stroke ↑ fill

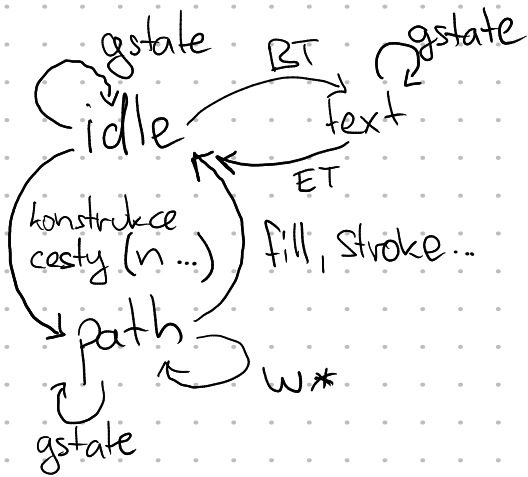
## Ořezávací cesty



W\*  
 $w^*$

- uzavírá cestu, chceme napsat n

## Kreslicí stavový automat



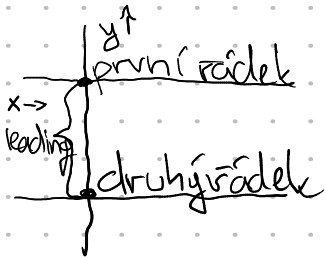
BT

font velikost Tf

x y Td

(řetězec) Tj

ET



$T^* \rightarrow 0$  -leading Td

' ...  $T^* T_j$

TD

$T_j [(str) kern (str) kern \dots]$

$\uparrow \frac{-1}{1000}$


leading  $T_L$

char spacing  $T_c$

word spacing  $T_w$

rendering mode  $T_r$  - fill, stroke, rytrofit crop

# XObjects

- Name Do
- obrázky - default 
- form - reusable stránka

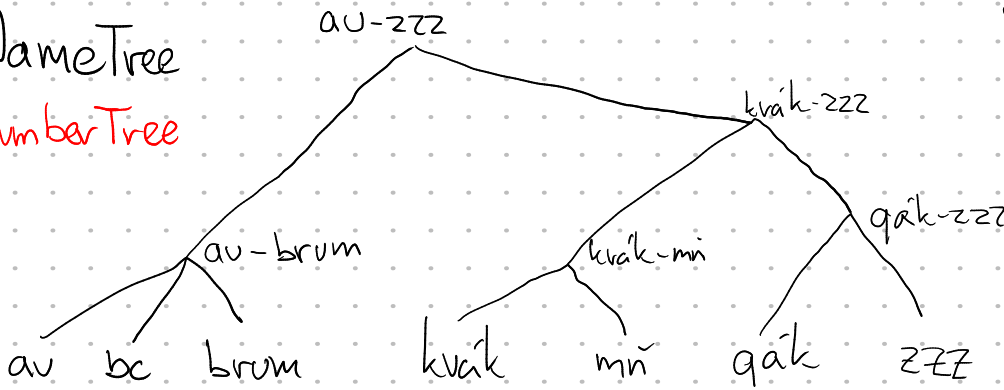
qpdf --qdf  
qpdf --fix-qdf

qpdf --show-object  
qpdf --show-object --raw stream

\pdfliteral

NameTree

NumberTree



<< /Kids [...]

/Limits [min max]

>>

<< /Limits [min max]

*Nums*  
/Names [(au) val1

(bc) ...

] ...