

# Font features

What are they

Substitution

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Examples

CONTEXT 2017 Maibach

- built in substitution that is often optional like ligatures but for some languages mandate
- built in positioning that is assumed to be applied like kerning, mark anchoring cursive
- external properties like coloring, spacing, fallback combinations
- engine related tricks like expansion and protrusion
- tracing options
- whatever you like ... so let me know
- so in CONTEX<sub>T</sub> we have font features (driven by font) and pseudo features (driven by additional needs)

**What are they**

- single: replace one by another
- alternate: replace one by one of a set
- multiple: replace one by multiple others
- ligature: replace multiple by one shape
- contextual lookups and replacements with look back and look ahead

## Substitution

- single: repositioning a glyph (with optional marks), this includes traditional kerning
- pairwise: repositioning two adjacent glyphs (with optional marks)
- anchoring: often used for marks to base glyphs, ligatures and other marks
- attachment: often used for cursive scripts, pasting glyphs in a word together
- contextual lookups and positioning with look back and look ahead

## Positioning

- analyze: needed for dealing with features that need information about initial, medial, final and isolated properties
- reordering: needed for script like devanagari
- spacing: deals with for positioning glyphs and spaces

**Related**

- solutions for similar tasks can be quite different which makes tracing or checking sometimes hard (many ways to make ligatures)
- order matters and demands careful font design but it is hard to predict all cases
- a sloppy font design can result in a performance hit or huge fonts
- features can be bugged and fonts vendors seldom have an update policy
- shapers can differ due to assumptions, heuristics, interpreting specifications, bugs, ...

**Pitfalls**

- all kind of substitutions: `2017-features-substitutiontest.tex`
- simple inter character kerns: `2017-features-kerntest.tex`
- single character positioning: `2017-features-singletest.tex`
- pairwise character positioning: `2017-features-pairtest.tex`
- contextual positioning: `2017-features-contextttest.tex`
- kerning with space (glue): `2017-features-spacetest.tex`

**Examples**