Kurt the PDFKitten

An Objective-C programming framework

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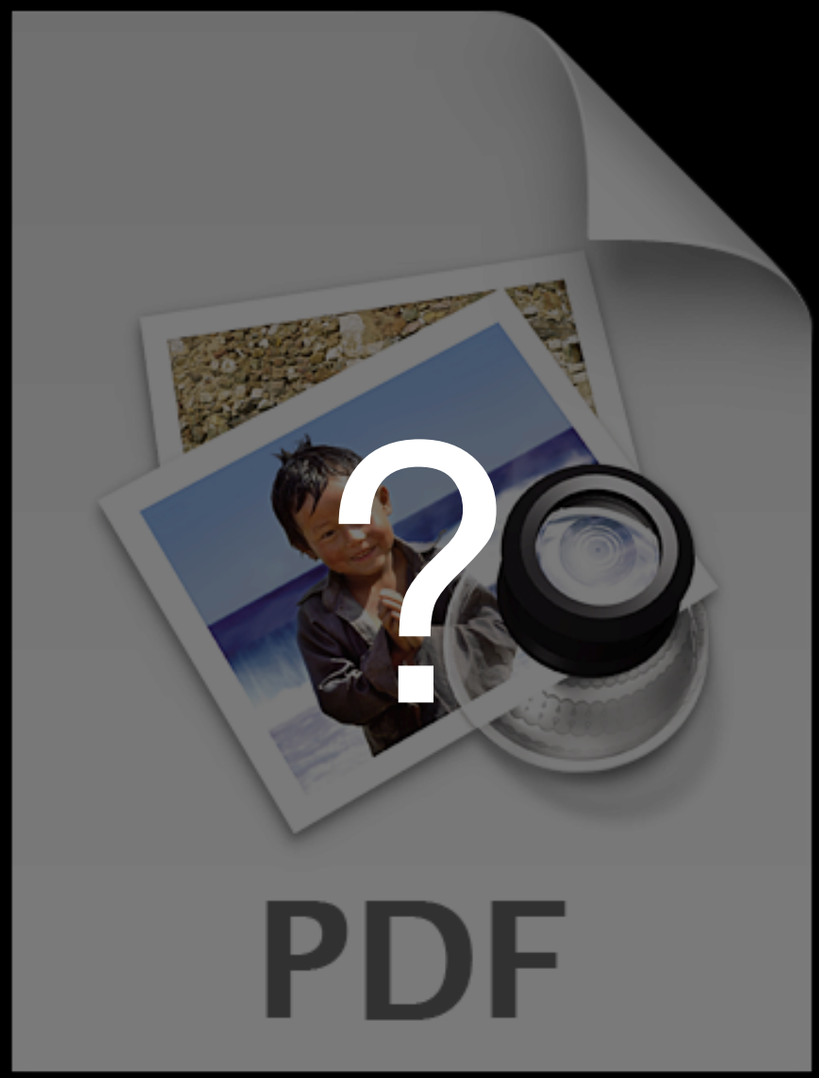
Missing library in iOS for search and annotation!



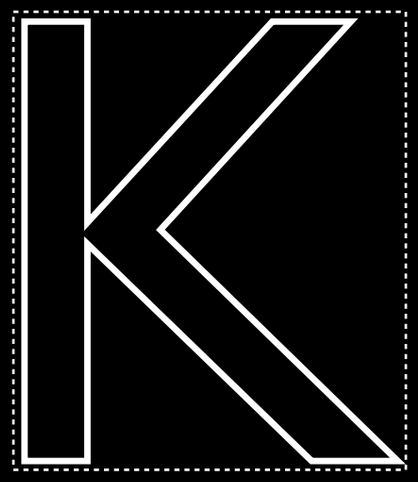
```
BT
  /F13 12 Tf
  288 720 Td
  (ABC) Tj
ET
```

Operators

Rendering State

- Text matrix
- Line matrix
- Font
- Fontsize
- Character spacing
- ...

Coordinate systems



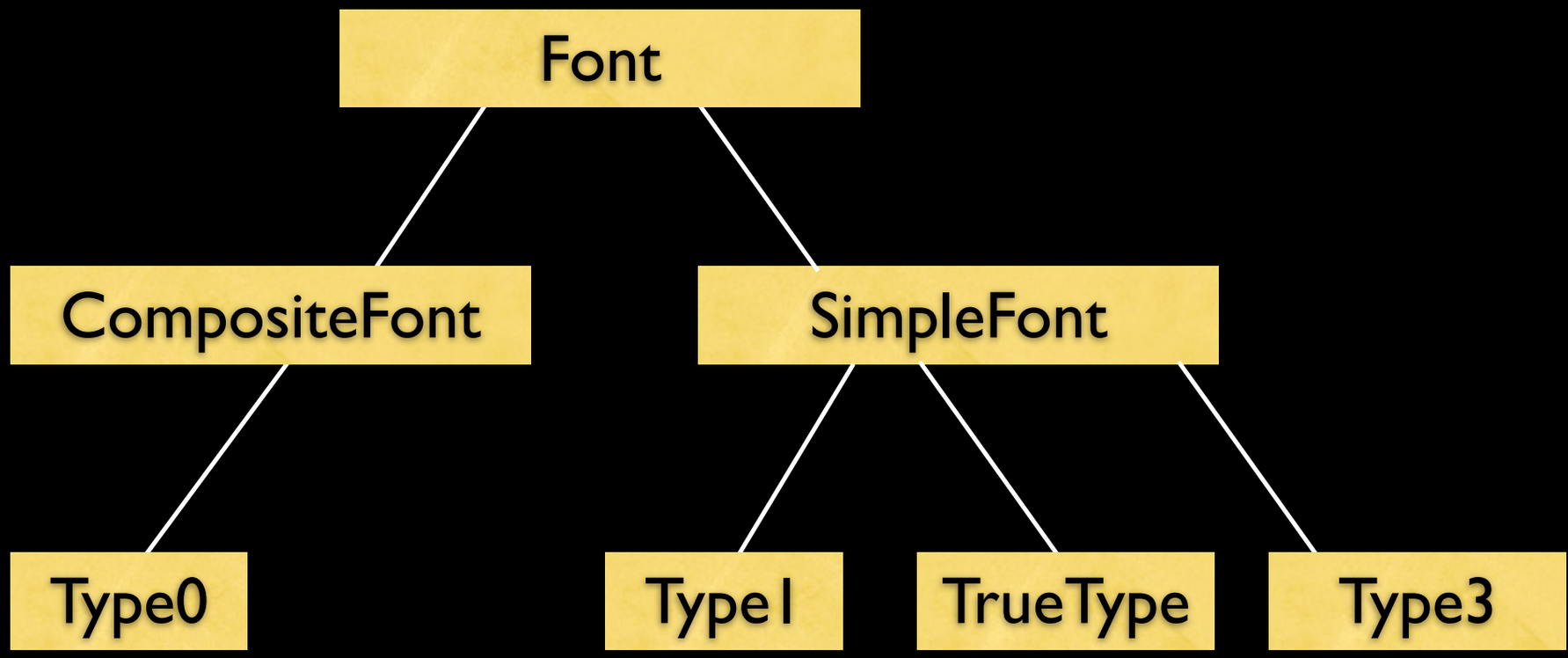
Font size →

Kurt

CTM →

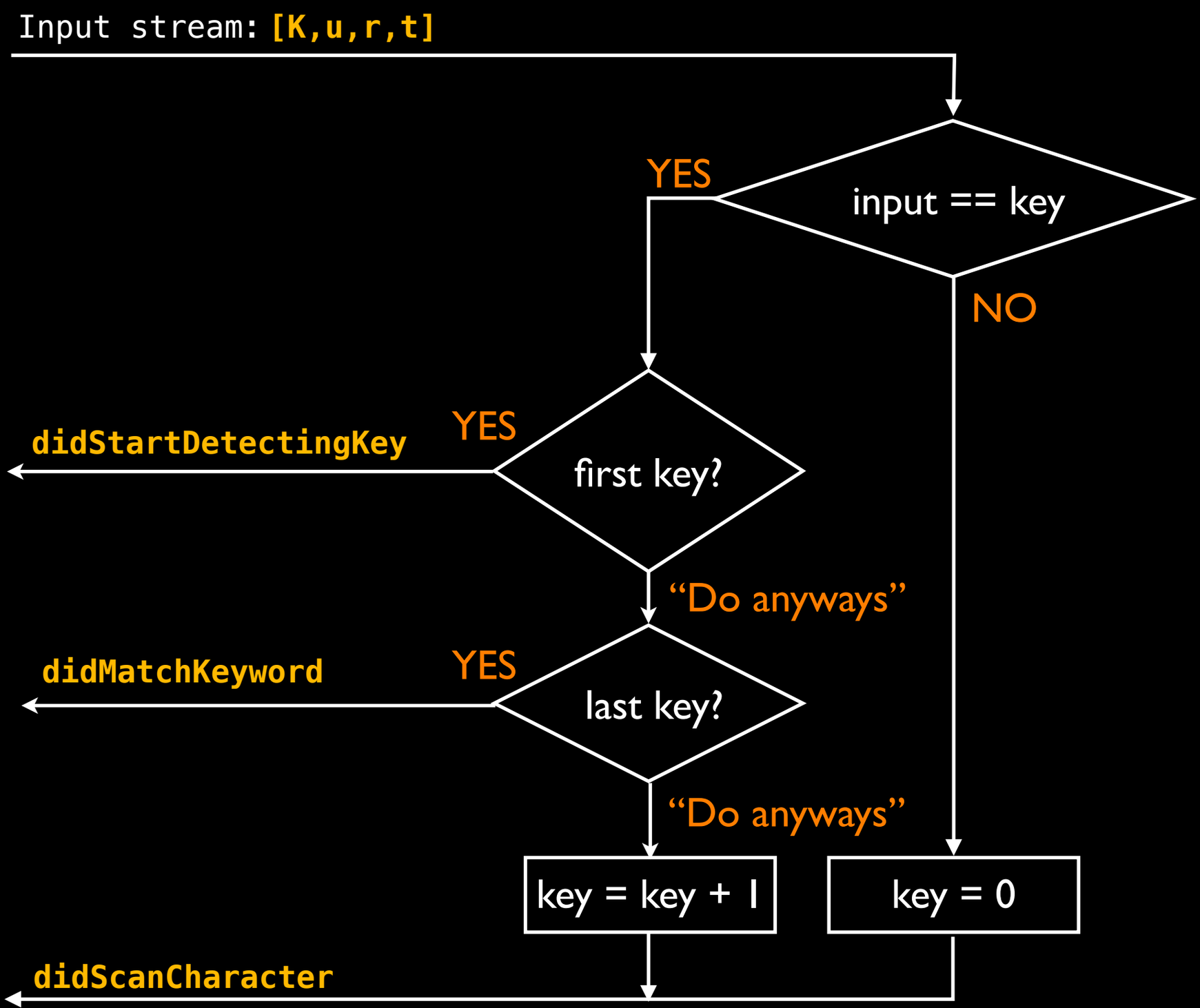
A cat in his best years, Kurt lives alone in his countryside house, miles outside the small town of Chatmonix.

Font

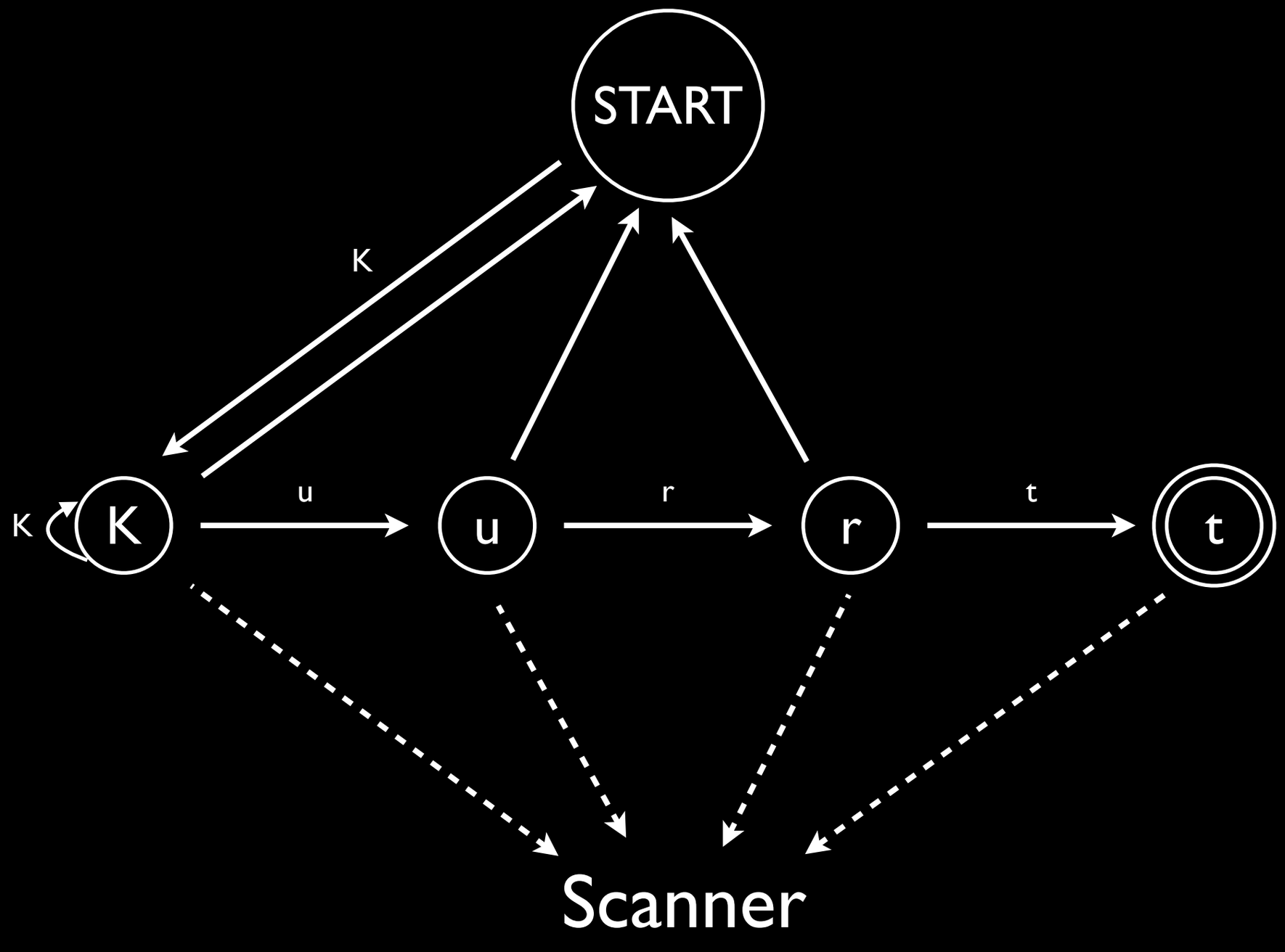

Font
CompositeFont
SimpleFont
Type0
Type1
TrueType
Type3

Character widths in glyph space

Keyword: “Kurt”



String detector



<0x6f 0x21>

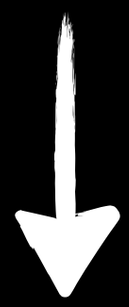
off

off

Input

ToUnicode

Expand ligatures



Initial state

didStartDetectingKey

String Detector

CGRect frame;
CGAffineTransform t;

Final state

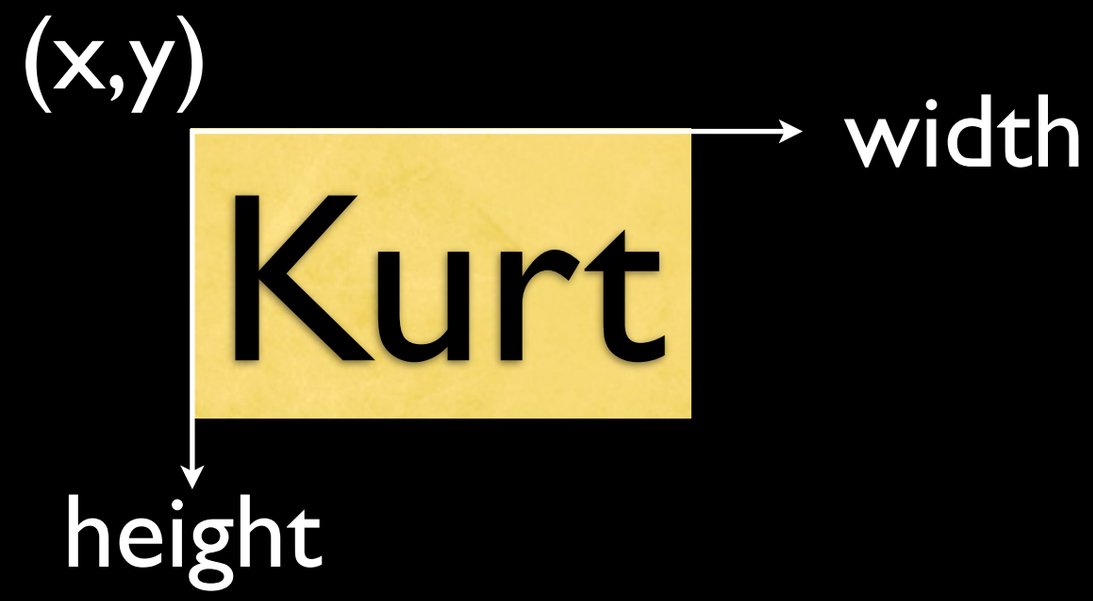
didMatchKeyword

didScanCharacter

Current rendering state

```
tx = tx + width(character)
```

Rectangle



Linear transform

$$\begin{bmatrix} a & b & 0 \\ c & d & 0 \\ t_x & t_y & 1 \end{bmatrix}$$

Pesky problems

- missing toUnicode mapping

  No way of telling how characters should be mapped from their CIDs!

- ligatures

  ligature not represented in unicode

- Diverse interpretations of standards

  For example using alignment instead of space character

Demo

Future work

- Outline
- Annotation