

IR 19./22.6.06

Notiztitel

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naiver Algorithmus

aabab

ab

a br

a

ab

Boyer-Moore-Match-Heuristik

abracadabra

11 10 9 8 7 6 5 4 3 2 1

. 13 12 4 1

abracadabra

Boyer-Moore-Horspool

P: ^{10 9 8 7 6 5 4 3 2 1 0}
a b r a c a d a b r a

T: ra

$d['a'] = 3$, $d['r'] = 1$, $d['b'] = 2$, $d['c'] = 6$, $d['d'] = 4$
 $d['\text{v}'] = 11$

Shift-Or: Verkettung der Statusvektoren

'abc' v 'cba' $T[a] = 110011$ $T[b] = 101101$
 $T[c] = 011110$

| a | b | c |
|---------|---------|---------|
| 110011 | 101101 | 011110 |
| 110,110 | 100,110 | 010,110 |
| 110,111 | 101,111 | 011,110 |

Treffer für 1. Pattern

Codes für Laufängen

γ -Code

| n | γ |
|-----|----------|
| 1 | 0 |
| 2 | 10,0 |
| 3 | 10,1 |
| 4 | 110,00 |
| 5 | 110,01 |
| 6 | 110,10 |
| 7 | 110,11 |
| 8 | 1110,000 |

$$\log 1 = 0 + 1 = \underline{1} \rightarrow 0$$

$$\log 2 = 1 + 1 = \underline{2}, 2 - 2^1 = 0$$

$$\lfloor \log 3 \rfloor = 1 + 1 = \underline{2}, 3 - 2^1 = \underline{1}$$

$$\log 4 = 2 + 1 = \underline{3}, 4 - 2^2 = 0$$

f-code

1. γ -Codierung von $\lfloor \log_2 x \rfloor + 1$
2. $x - 2^{\lfloor \log_2 x \rfloor}$ im Binärcode

| n | f | |
|---|-----------|---------------|
| 1 | 0 | $\gamma(0+1)$ |
| 2 | 100,0 | $\gamma(1+1)$ |
| 3 | 100,1 | |
| 4 | 101,00 | $\gamma(2+1)$ |
| 5 | 101,01 | |
| 6 | 101,10 | |
| 7 | 101,11 | |
| 8 | 11000,000 | $\gamma(3+1)$ |

1000, 10100, 0, 1000
 2 4 1 2

$$V = (1, 2, 4, 8, 16, \dots)$$

$$n = 3 \rightarrow \underline{k = 2}$$

$$r = 3 - 1 - 1 = \underline{1}$$

$$\log_2 V_k = 1$$

$$\lfloor \log_2 V_n \rfloor - V_k$$

$$\frac{100,1}{2}$$

Golomb-Code

$$V = (3, 3, 3, 3, \dots)$$

| n | Golomb |
|-----|--------|
| 1 | 0,0 |
| 2 | 0,10 |
| 3 | 0,11 |

$$k = 1, r = 1 - 0 - 1 = 0$$

$$k = 1, r = 2$$

$$r < 2^2 - 3 = 1$$