

$\begin{matrix} \text{Pos}_y \\ \text{Pos}_x \end{matrix}$	0	1	2	3
0	1	1	1	1
1	0	1	2	2
2	2	1	0	1
3	0	0	2	1

$$H_{x \times y} = \frac{1}{16} \cdot \lg \frac{1}{16} + \frac{9}{16} \lg \frac{9}{16} \dots \frac{1}{16} \lg \frac{1}{16} = 3,5$$

Abb 2:

$$H_{x \times y} = 3,5$$

Abb 3: 3,2

$$H_{x \times y} = 3,2$$

2 zu 1:

$$\Delta H = 3,5 - 3,5 = 0$$

3 zu 1:

$$\Delta H = 3,5 - 3,2 = 0,3$$

Fingerring:

$$\begin{aligned} \text{Abb. 1: } & (3,5) \\ 2: & (3,5) \\ 3: & (3,2) \end{aligned}$$

$$\begin{aligned} H_{\max} &= -16 \cdot \left(\frac{1}{16} \lg \frac{1}{16} \right) = \\ &= 4 \end{aligned}$$

Redundanz:

$$\text{Abb 1: } 4 - 3,5 = 0,5$$

$$2: 0,5 \quad " \quad " \quad "$$

$$3: 4 - 3,2 = 0,8$$

AB 3)

2 zu 1:

Pflaume

Variante 2

Abb 1:

Pos	0	1	2	3
f_x	3	3	5	5
f _y	4	5	4	3

~~p_x~~
~~p_y~~

$$H_x = \left(\frac{3}{16} \cdot \ln \frac{3}{16} + 2 \right) + \left(\frac{5}{16} \cdot \ln \frac{5}{16} + 2 \right) = 1,95$$

$$H_y = \dots = 1,98$$

$$H_x + H_y = 3,93$$

Abb 2:

<Tabelle hier>

$$H_x = 1,95$$

$$H_y = 1,98$$

$$\Delta H = 3,93 - 3,93 = 0$$

3 zu 1:

$$H_x = \dots = 1,92$$

$$H_y = \dots = 1,98$$

$$H = 3,9$$

$$\Delta H = 3,93 - 3,9 = 0,03$$

Fingerprints:

~~(3,93~~ Abb 1: (1,95; 1,98)
2: (1,95; 1,98)
3: (1,92; 1,98)

$$H|_{\max} = 4$$

Redundanz:

$$\text{Abb 1: } 4 - 3,93 = 0,07$$

$$2: \quad \quad \quad "$$

$$3: \quad 4 - 3,9 = 0,1$$