[illegible]

[illegible]

[illegible]

$$I(X;Y) = 0$$

$$I(X;Y) = H(X) - H(X|Y) = H(Y) - H(Y|X)$$

$$P(Y|X) = P(k \oplus Y \mid X) = \frac{1}{2^m}$$

$$P(Y) = \sum_x P(Y|X)P(x) = \sum_x \frac{1}{2^m} P(x) = \frac{1}{2^m} \sum_x P(x) = \frac{1}{2^m}$$

$$\Downarrow$$

$$P(Y) = P(Y|X) \Rightarrow H(Y) = H(Y|X) \Rightarrow I(X;Y) = 0$$

[illegible] [illegible]

$$\left.\begin{array}{l} y_A = x \oplus k_A \\ y_{AB} = x \oplus k_A \oplus k_B \\ y_B = x \oplus k_B \end{array}\right\} \quad y_A \oplus y_{AB} \oplus y_B = x$$

nyúcode gyakorlat

CDMA / ...

$c = (1, 1)$ $\quad y = [-0,6 \; ; \; 1,8]$

$c = (-1, -1)$ $\quad \bar{R} = \bar{C} \cdot \bar{c}$

$y = (+1, -1)$ $\quad \bar{R} \bar{y} + \bar{D} \cdot \bar{x}$

$$\bar{C} = \bar{\bar{C}}^T = \begin{bmatrix} 1 & -1 \\ 1 & -1 \end{bmatrix}$$

$$\bar{C} = \frac{1}{\sqrt{2}} \begin{bmatrix} 1 & -1 \\ 1 & -1 \end{bmatrix}$$

$$\begin{bmatrix} 2 \\ 2 \end{bmatrix} + \begin{bmatrix} -0,2 \\ -1,4 \end{bmatrix} = \begin{bmatrix} 1,8 \\ 3,4 \end{bmatrix}$$

$$\hat{y} = \min_{y \in C} \bar{y}^T \bar{R} y - 2x^T y \quad = -3,2$$

$$V_{11} = \quad \begin{bmatrix} 2 \\ 2 \end{bmatrix} \qquad \begin{bmatrix} 1 \\ -1 \end{bmatrix}$$

$V_{1,-1} =$ $\quad [1 \; -1]\; 0 \qquad [1,8 \quad 3,4] \; -1,6$

$V_{-1,1} =$

$V_{-1-1} =$ $\quad$ => levonalan mind => minimum

↳ Valaszy ort leküldtük el

$$\begin{bmatrix} +1 & +1 \\ +1 & -1 \end{bmatrix}$$

$$\begin{bmatrix} + & + & + & + \\ + & - & + & - \\ + & + & - & - \\ + & - & - & + \end{bmatrix}$$