



2 4 5

$$P(Y = c_k | X = x) \quad \text{if } x \in \mathcal{X}_k$$

$$= \frac{P(Y = c_k \cap X = x)}{P(X = x)}$$

$$\cancel{P(X = x)} P(Y = c_k)$$

$$= \frac{P(X = x | Y = c_k) P(Y = c_k)}{P(X = x)}$$

$$P_e = \frac{\text{错误接收的码元数}}{\text{传输的总码元数}} = \frac{N_e}{N}$$

接收的比特数在传输总比特数中所占的比例，

$$P_b = \frac{\text{错误接收的比特数}}{\text{传输的总比特数}} = \frac{I_e}{I}$$

D. M 进制时, 有 $P_b = P_e \cdot \log_2 M$

$$P_b = \frac{\text{错误码元}}{\log_2 M} = \frac{1}{M}$$

↓
总

$$\log(p(y|x)) - \log \left(\sum w_i f_i(x_i) \right)$$

$$= \exp \left(\frac{\sum_i w_i f_i(x, y)}{\sqrt{w_0 - 1}} \right)$$

$$= \exp \left(\frac{\sum w_i f_i(x, y)}{\sqrt{w_0 - 1}} \right)$$

$$1 = \frac{\sum e(\sum w_i f_i(x, y))}{e(1 - w_0)}$$

$$e(1 - w_0) = \sum e(\sum w_i f_i(x, y))$$

$$p_{w/y|x} = \frac{e(\sum w_i f_i(x, y))}{\sum e(\sum w_i f_i(x, y))}$$

$$L(P, w) = \sum_{i=1}^5 P(y_i) \log P(y_i) + w_1 \left(P(y_1) + P(y_2) - \frac{3}{10} \right) + w_0 \left(\sum_{i=1}^5 P(y_i) - 1 \right)$$

$-w_1 - w_0 - 1$

$-w_0 - 1$

$2e + 3e$

