

Einheiten

1 MByte = 1000 KByte = 1000000 Byte = 8000000 Bit = 8000 KBit = 8 MBit

Formeln

$$\frac{1,22 \cdot \text{MSS}}{\text{RTT} \cdot \sqrt{L}}$$

$$\text{EstimatedRTT}' = (1 - \alpha) \cdot \text{EstimatedRTT} + \alpha \cdot \text{SampleRTT}$$

$$\text{DevRTT}' = (1 - \beta) \cdot \text{DevRTT} + \beta \cdot \text{SampleRTT} - \text{EstimatedRTT}$$

$$R = \text{remainder} \left[\frac{D \cdot 2^r}{G} \right]$$

$$D \cdot 2^r \text{ xor } R$$

$$\text{TimeoutInterval} = \text{EstimatedRTT} + 4 \cdot \text{DevRTT}$$

$$\text{efficiency} = \frac{1}{1 + 5 \cdot t_{prop}/t_{trans}}$$

$$c = \frac{2}{T} \cdot \int_0^T g(t) dt$$

$$g(t) = \frac{1}{2} \cdot c + \sum_{n=1}^{\infty} a_n \sin(2\pi n f t) + \sum_{n=1}^{\infty} b_n \cos(2\pi n f t)$$

$$a_n = \frac{2}{T} \cdot \int_0^T g(t) \cdot \sin(2\pi n f t) dt$$

$$b_n = \frac{2}{T} \cdot \int_0^T g(t) \cdot \cos(2\pi n f t) dt$$

$$d_x(y) = \min_v \{c(x, v) + d_v(y)\}$$

$$\text{maximum data rate} = H \cdot \log_2(1 + S/N) \text{ bit/s}$$

$$\text{maximum data rate} = 2 \cdot H \cdot \log_2 V \text{ bit/s}$$

$$\int_0^T \sin(2\pi k f t) \cdot \sin(2\pi n f t) dt = \begin{cases} 0 & \text{for } k \neq n \\ T/2 & \text{for } k = n \end{cases}$$

$$\log_2 x = \frac{\log_{10} x}{\log_{10} 2}$$

$$\text{Lichtgeschwindigkeit} = 299792458 \text{ m/s } (\approx 3 \cdot 10^8 \text{ m/s})$$