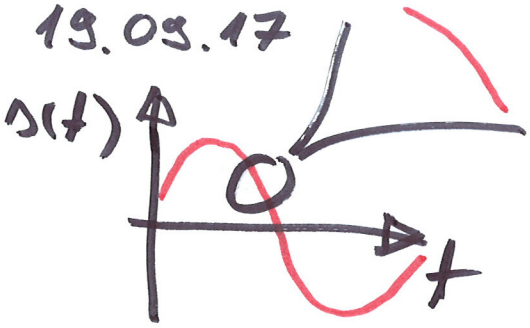
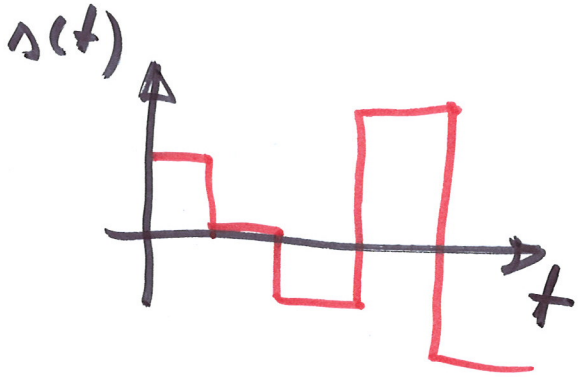
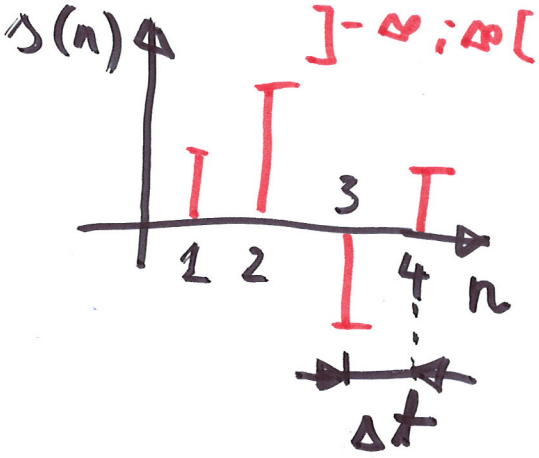
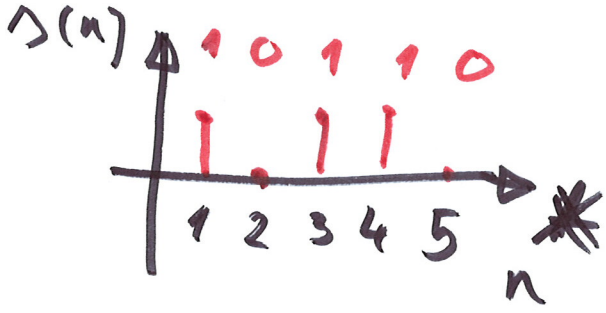
19.09.17

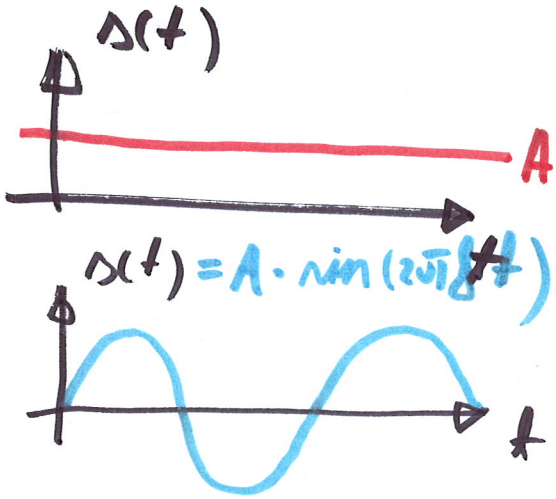


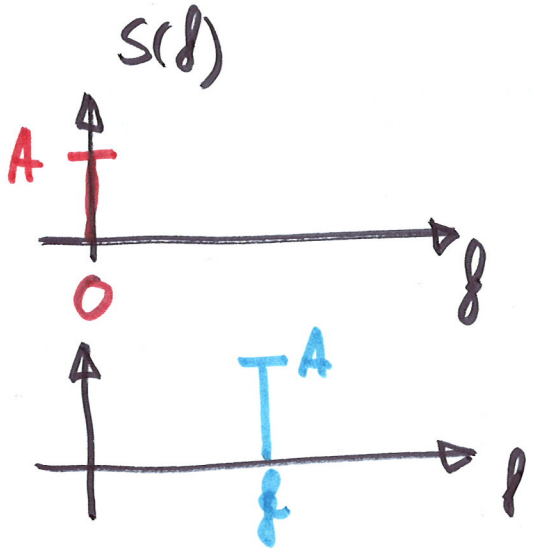




## FFT ↔ IFFT




$(2\pi \cdot f \cdot t)$

$\omega$




$P = \frac{A^2}{2}$

RIBALAIUS $B = f_{max} - f_{min}$ [Hz]

VÕIMSUS P

3,6 MW = 3.600.000 W

10 MW

1 μW

$8 \cdot 10^{-16}$ W (−121 dBm) 0,8 fW

$P_2 = 1\,kW$

$P_1 = 0{,}1\,mW$

$$\frac{1000}{0{,}0001} = \frac{10^3}{10^{-4}} = 10^7 =$$

10.000.000

70 dB

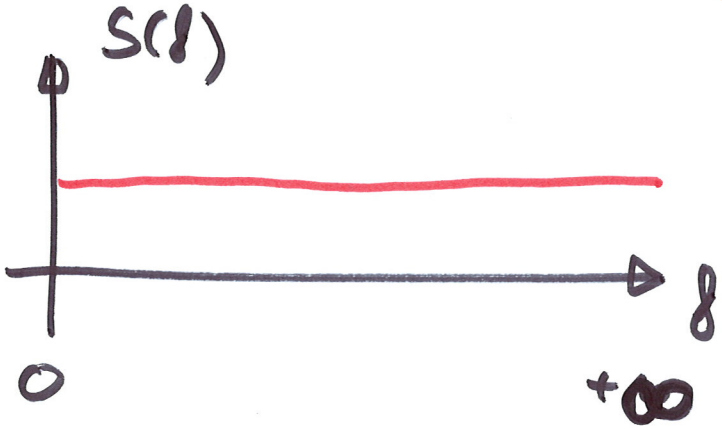
$1\,kW = 30\,dBW = 60\,dBm$

$0{,}1\,mW = -10\,dBm$

$\log_a(b \cdot c) = \log_a b + \log_a c$

$\log_a(b/c) = \log_a b - \log_a c$

$K = 60 - (-10) = 70\,dB$




SIGNAAL-MÜRA SUHE

$$SNR = \frac{S}{N} \qquad 10 \cdot \log\left(\frac{S}{N}\right)\ [dB]$$

$B = 165\,kHz \quad SNR = 31 \quad (14{,}9\,dB)$

$$C = 1{,}65 \cdot 10^5 \cdot \log_2(1+31) = 1{,}65 \cdot 10^5 \cdot 5 = 8{,}25 \cdot 10^5\ [bit/s]$$

$0{,}825\,Mbit/s$

# ETHERNET IEEE 802.3

10BASE2 BNC