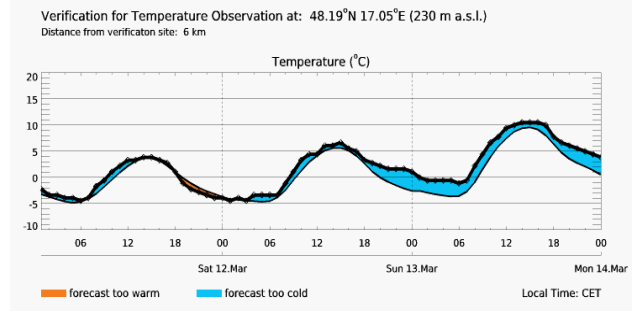
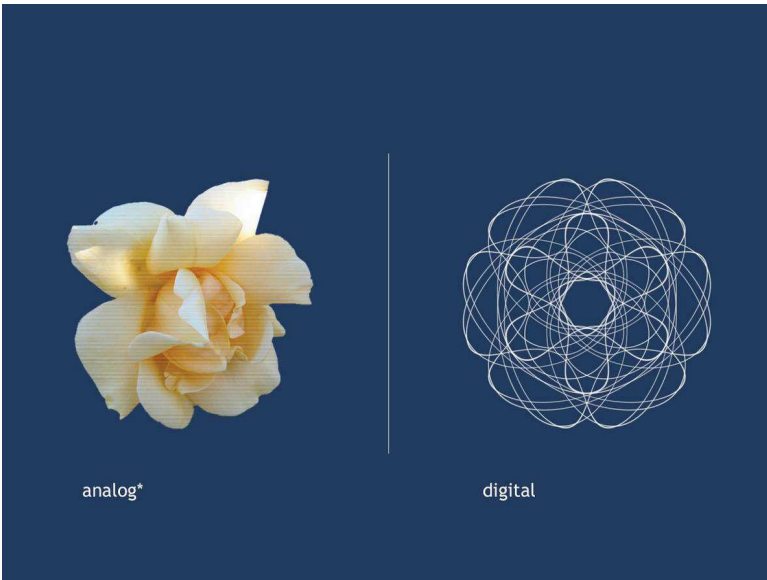


Analógový vs. Digitálny



VZORKOVANIE = SAMPLING

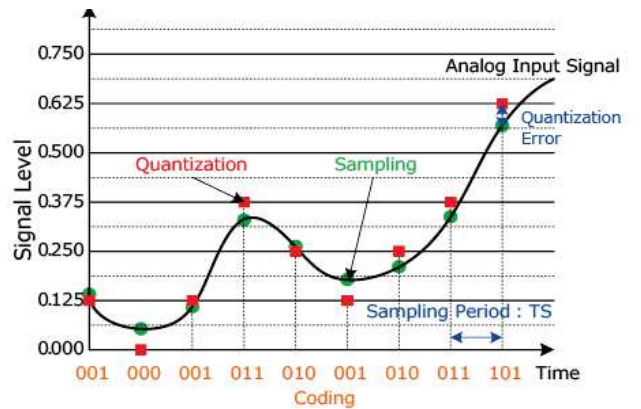
https://www.meteoblue.com/sk/po/C4%8Dasie/historyclimate/verificationsshort/bratislava_slovensk%C3%A1-republika_3060972

Analógový vs. Digitálny



KVANTOVANIE = QUANTIZATION

Analógový vs. Digitálny



Vzorkovanie

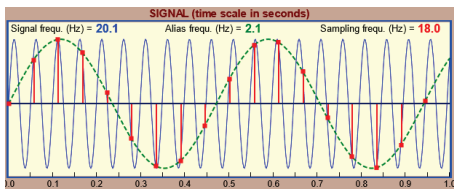
Nyquist -- Shannon -- Koteľnikov

$$x(t) \rightarrow x_0, x_1, x_2, \dots, x_n: x_k = x(kT)$$

kde T je perióda vzorkovania

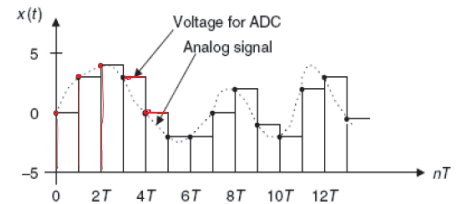
$$f_s = \frac{1}{T}$$

$$f_s > 2f_{max}$$



http://195.134.76.37/applets/AppletNyquist/App1_Nyquist2.html

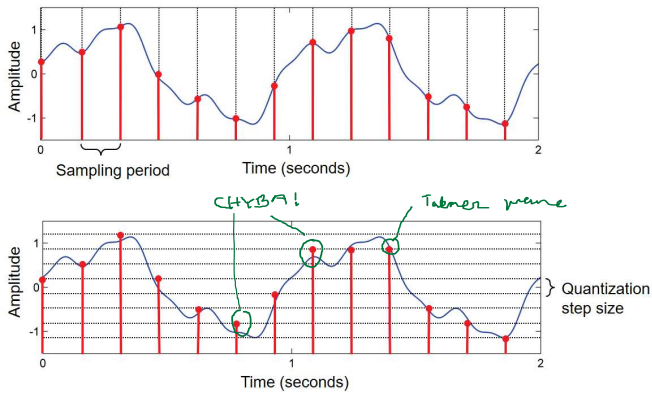
Rekonštrukcia



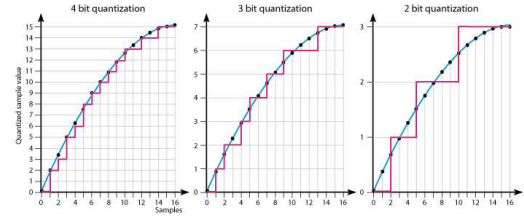
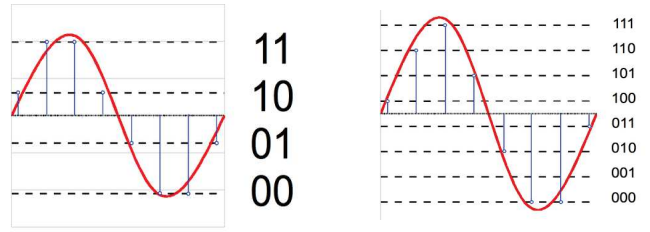
$$f_s > 2f_{max}$$

Kvantovanie

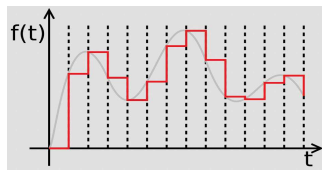
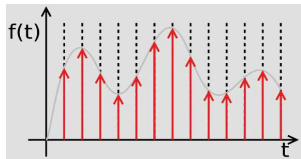
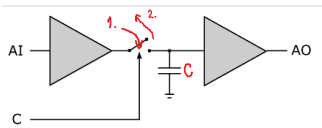
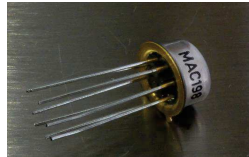
Figure 2.13 from [Müller, FMP, Springer 2015]



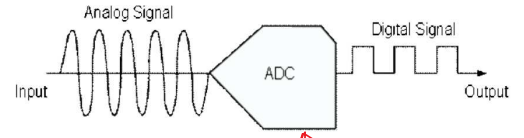
Kvantovanie



Sample & Hold



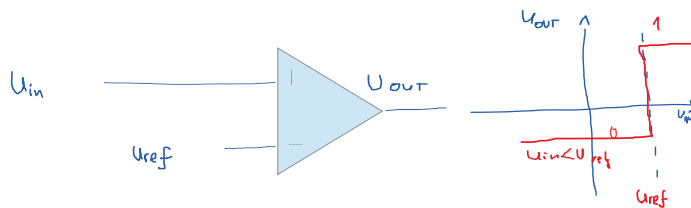
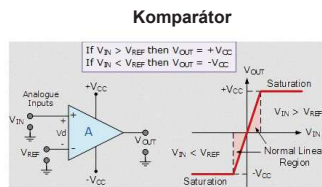
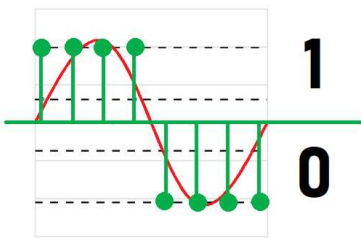
A/D prevodník I.



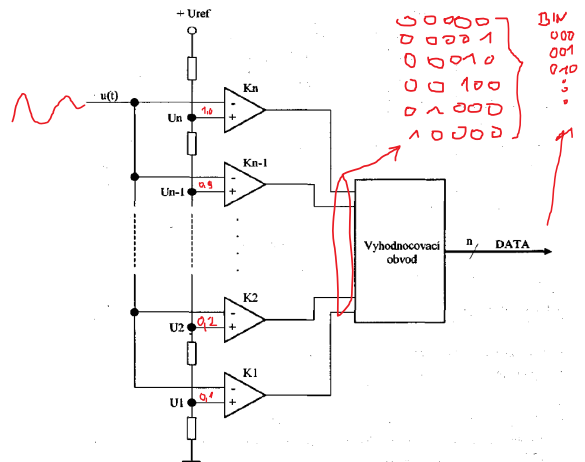
Electrical symbol [edit]



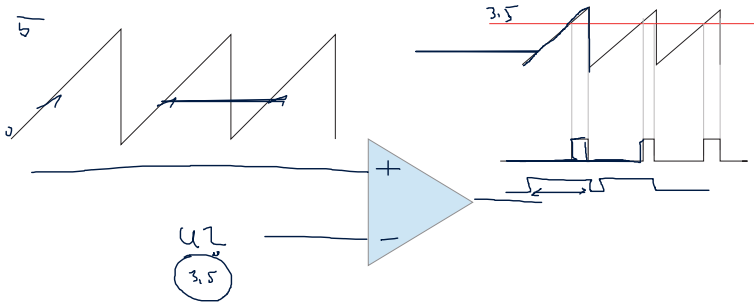
A/D prevodník



Paralelný A/D prevodník

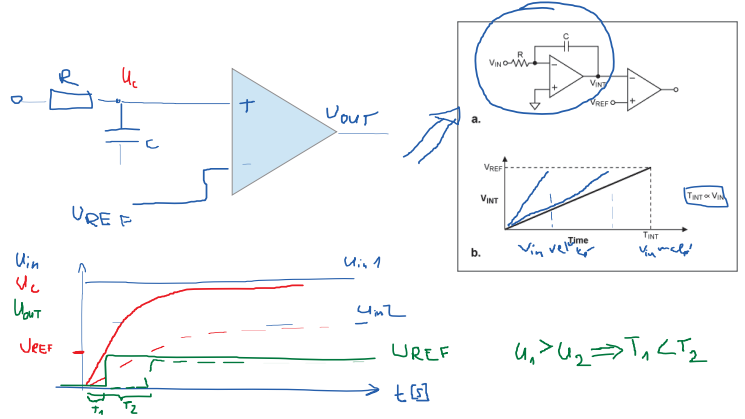


Integračný A/D prevodník



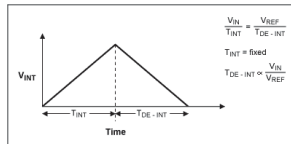
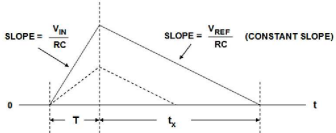
Integračný A/D prevodník

Single-Slope ADC Architecture



Integračný A/D prevodník

Dual-Slope ADC Architecture



$$\frac{V_{IN}}{RC} T = \frac{V_{REF}}{RC} T_x$$

$$T_x = \frac{V_{IN}}{V_{REF}} T \Rightarrow V_{IN} = \frac{T_x}{T} \cdot V_{REF}$$

HIGH NORMAL MODE REJECTION AT MULTIPLES OF $\frac{1}{T}$

