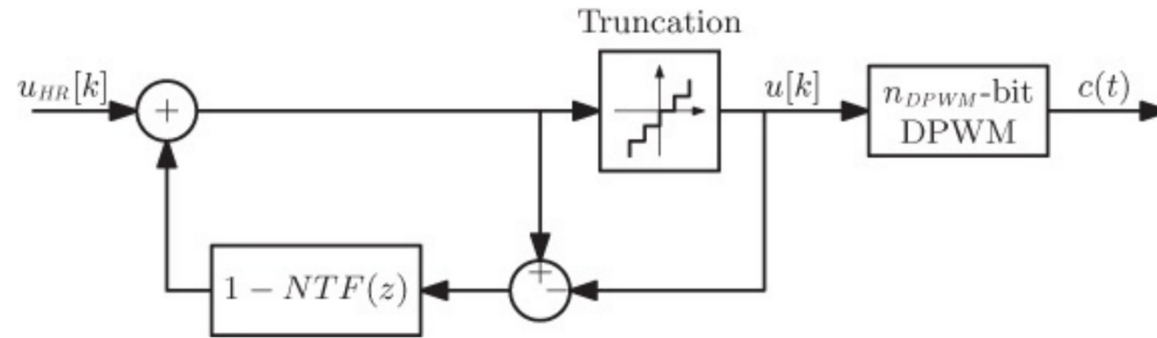
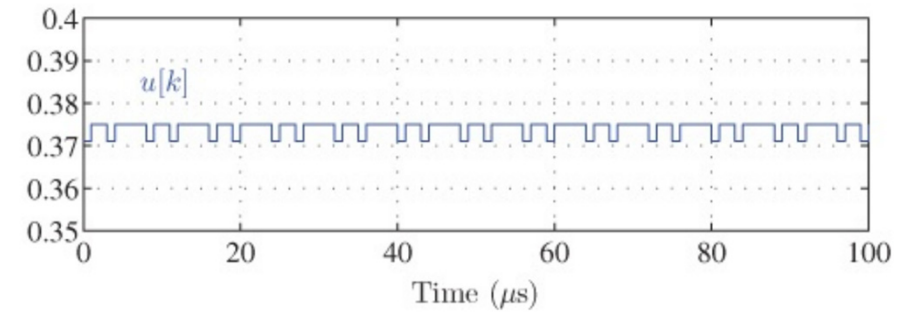
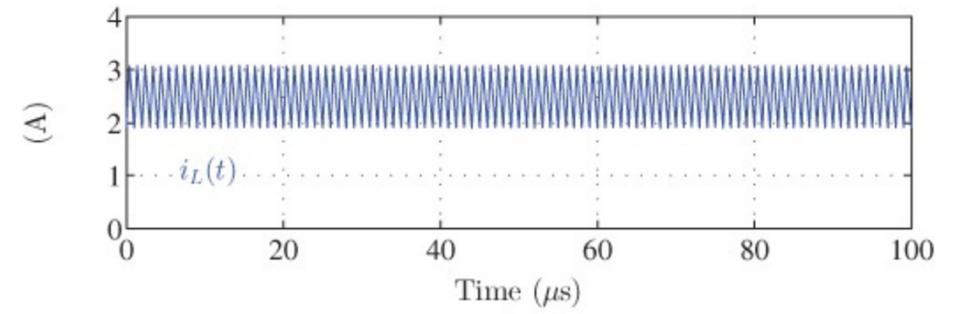
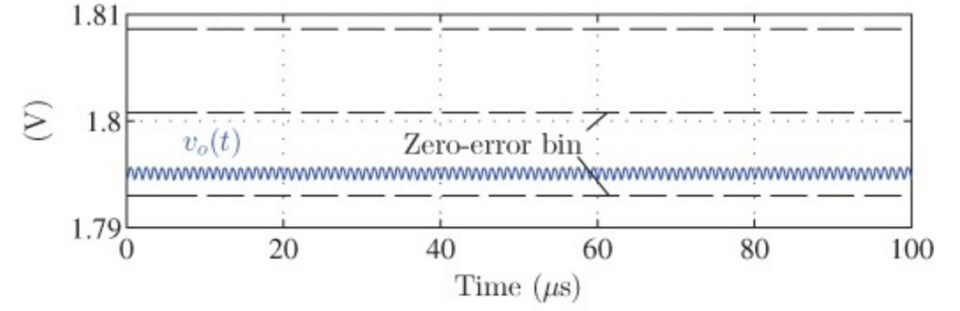


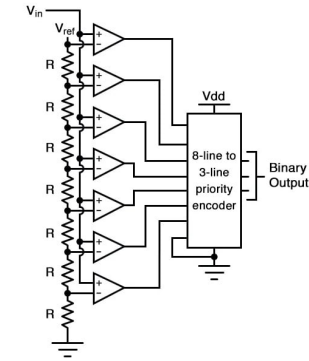
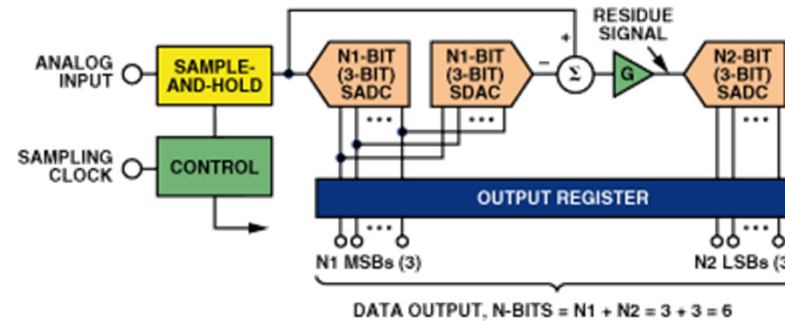
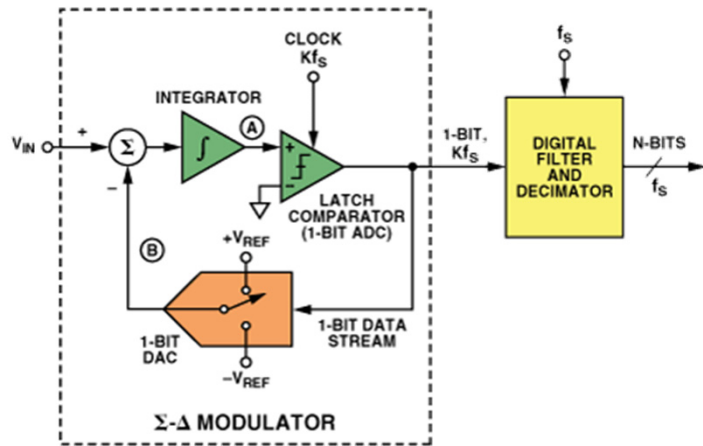
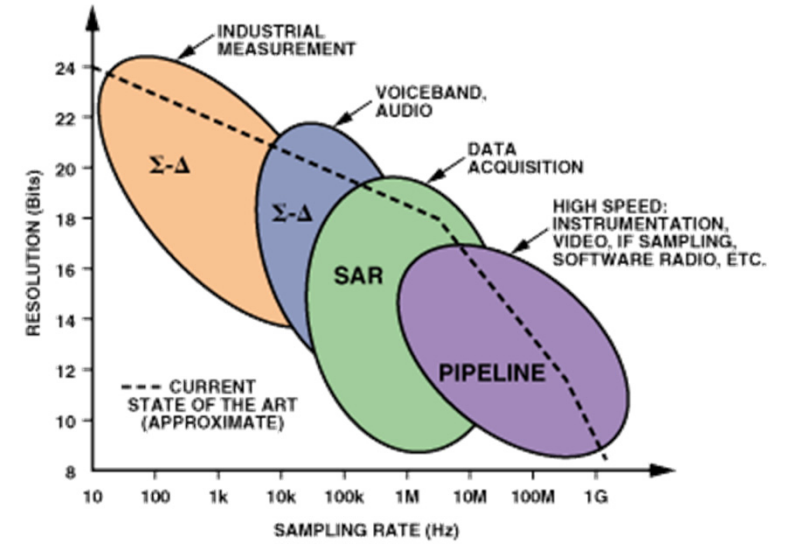
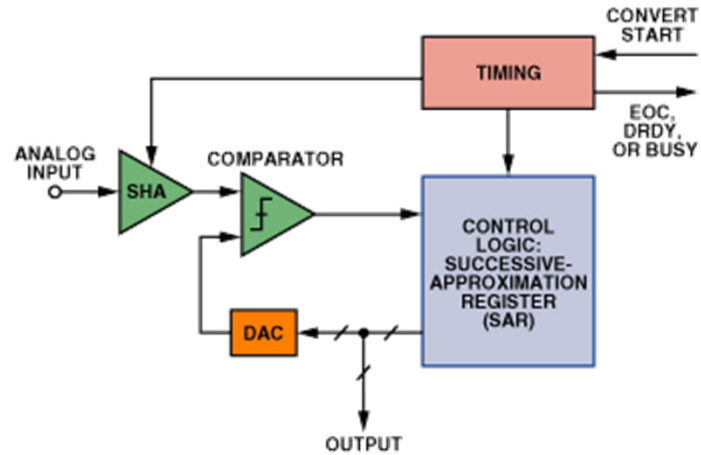
# Quantization Noise

# $\Sigma\Delta$ Modulation



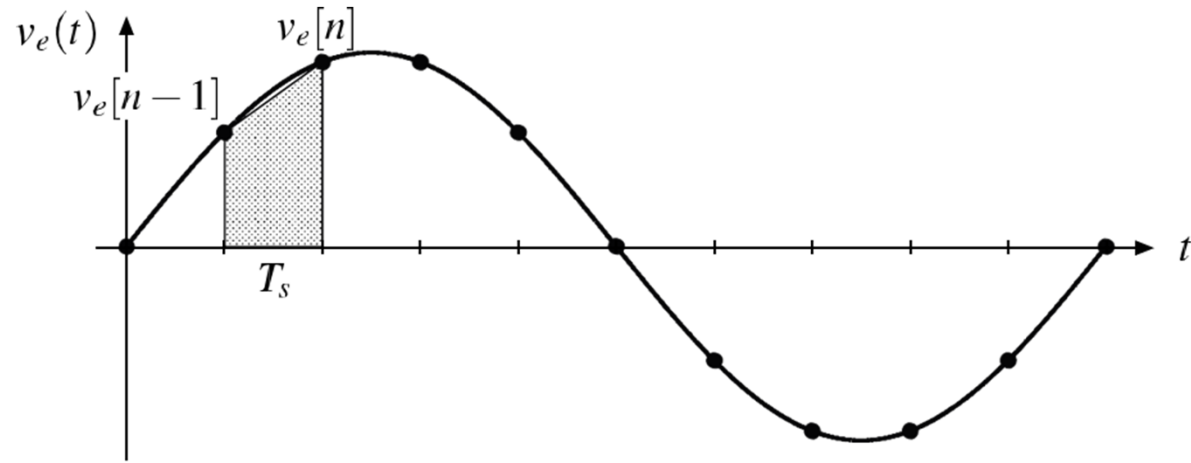


# ADC implementation

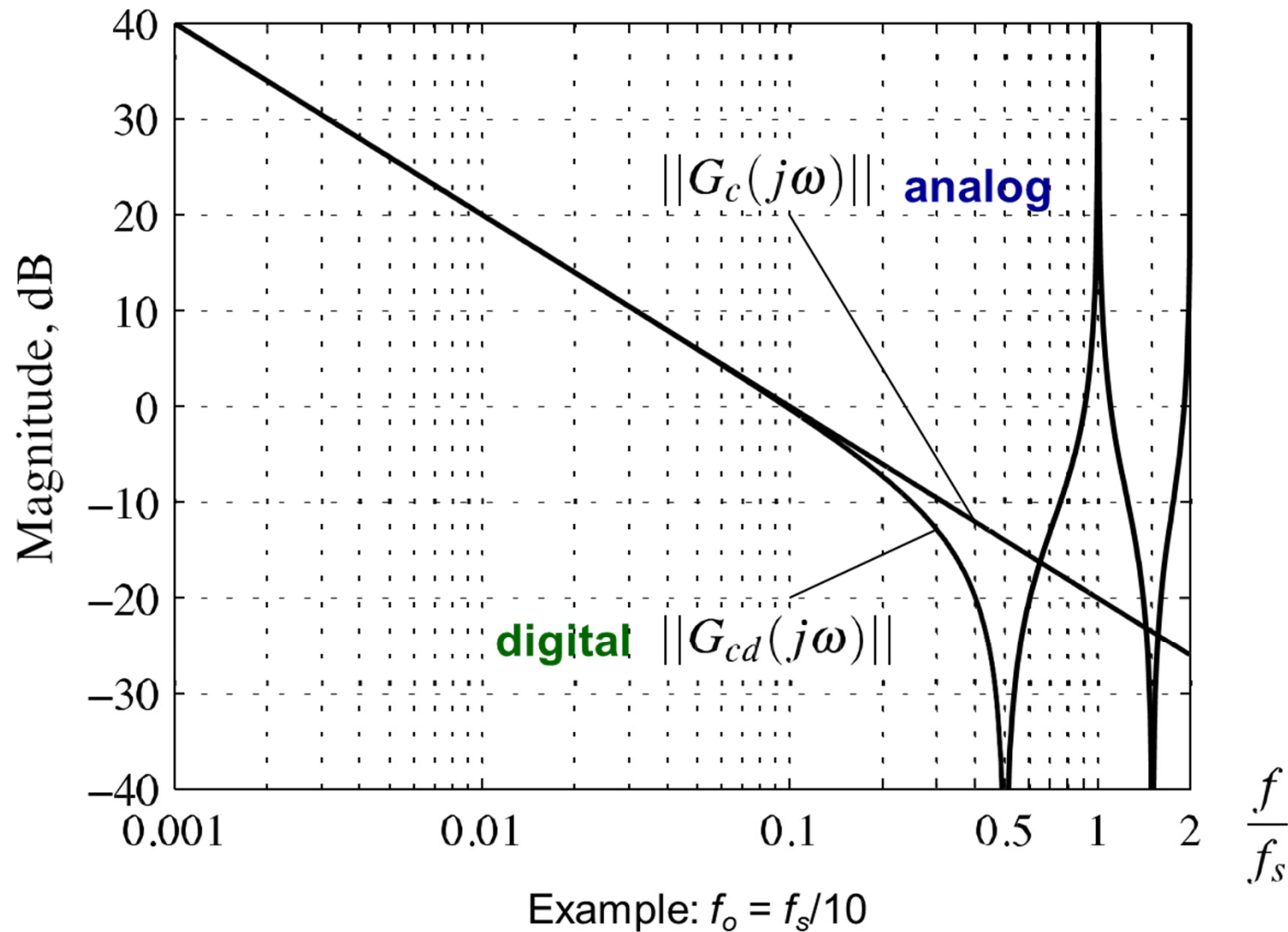


# Digital Compensator Design

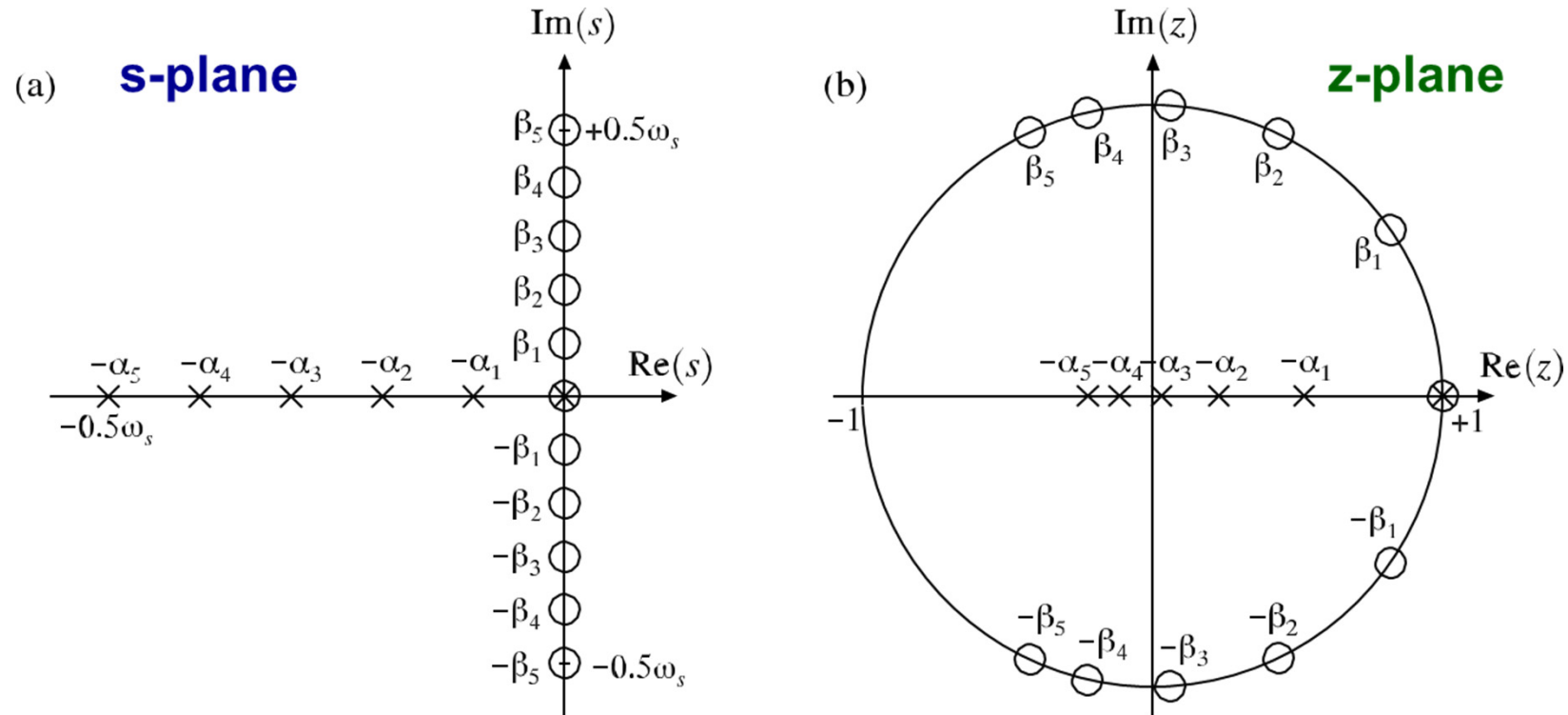
# DT Integrator



# Magnitude comparison

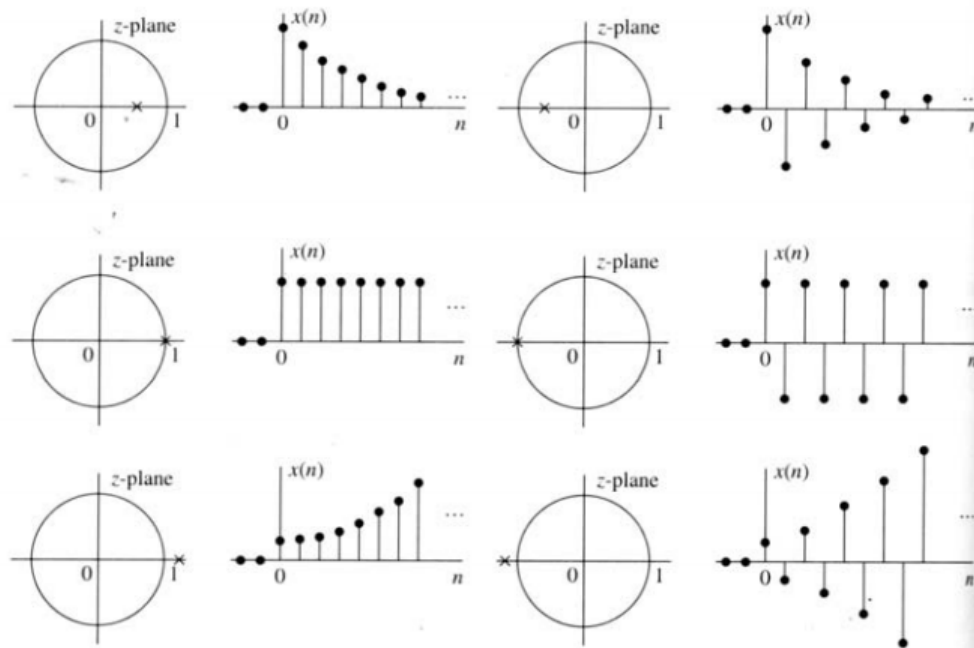


# Pole Mapping

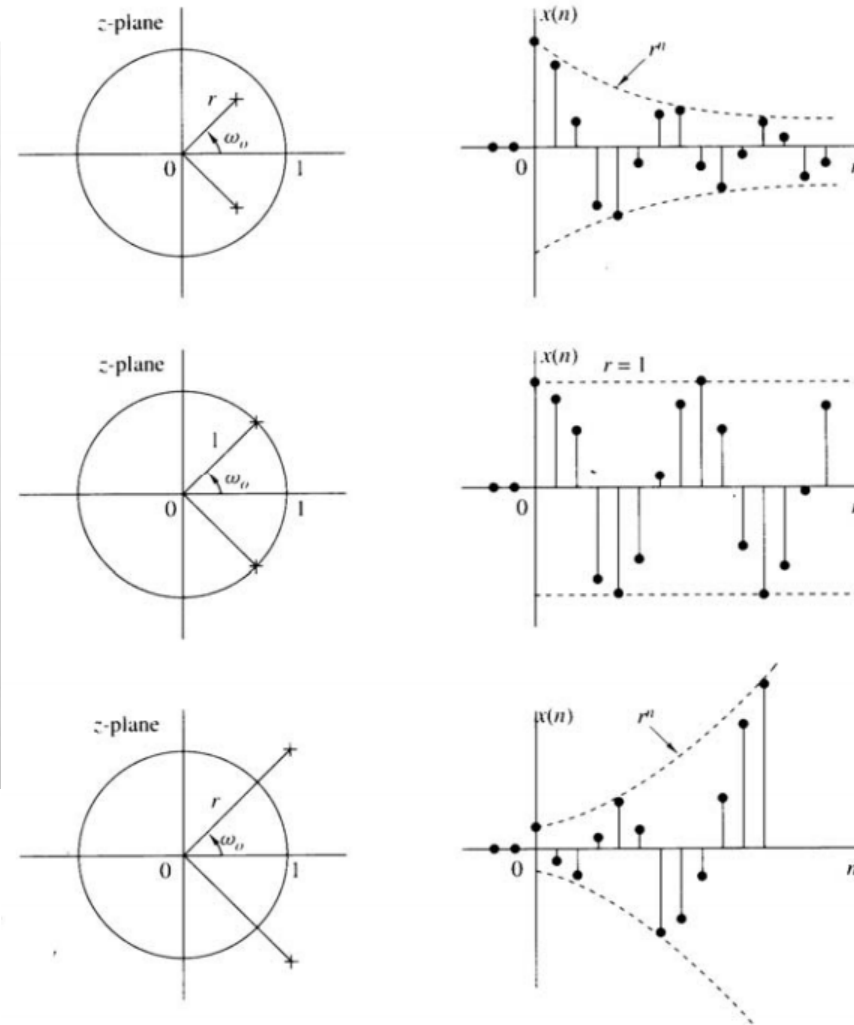




# DT Natural Response



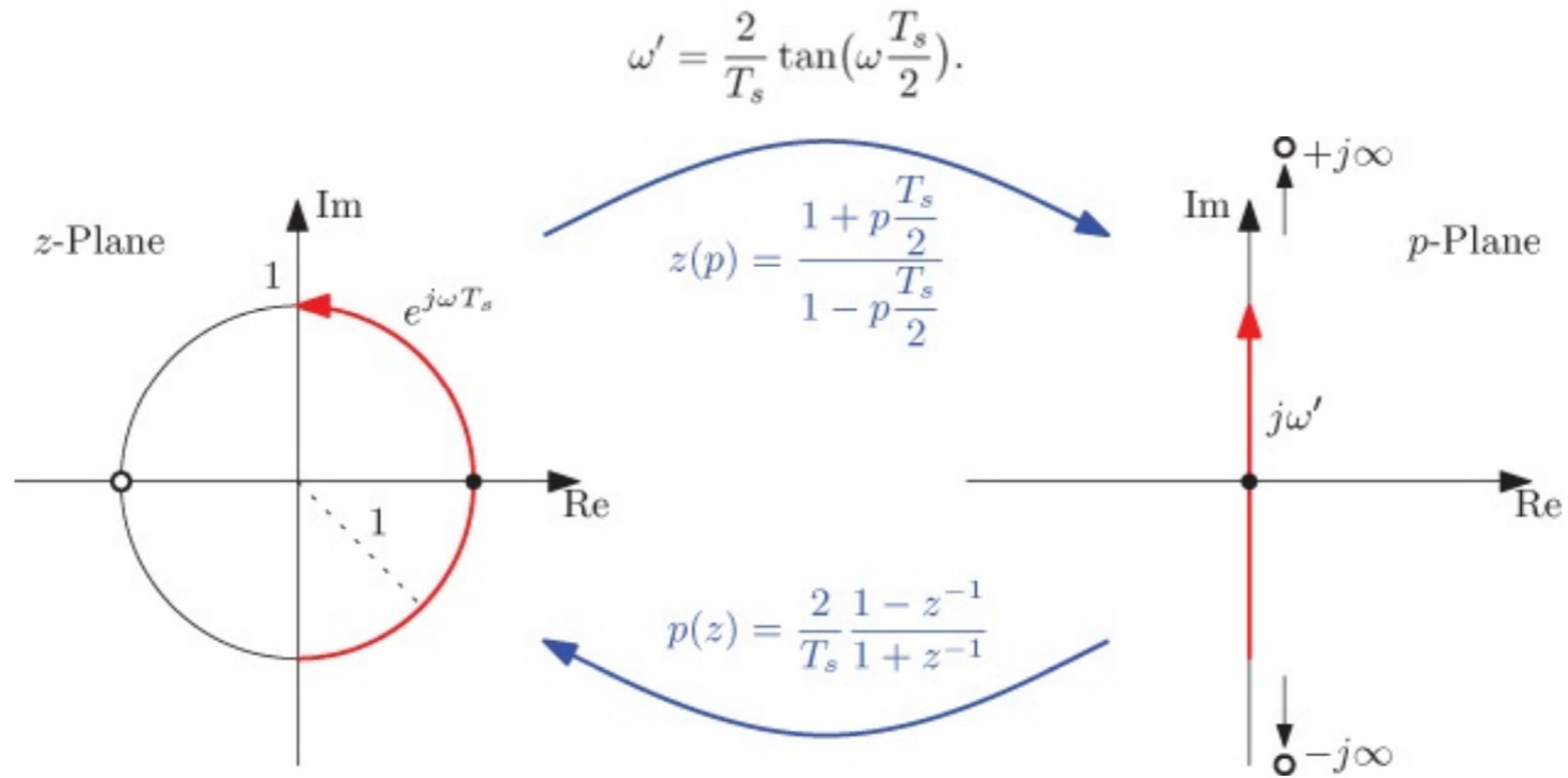
**Figure 3.11** Time-domain behavior of a single-real pole causal signal as a function of the location of the pole with respect to the unit circle.



**Figure 3.13** A pair of complex-conjugate poles corresponds to causal signals with oscillatory behavior.

# Frequency Response

# Mapping Between Domains



# Prewarping

# Compensator Design Approach