

Digital vs. Analog Abstraction Levels

Digital Information Processing	Analog Information Processing
Stochastic Signal Detection/Estimation Operations	?
Simple DSP filtering	<u>Op amp filtering functions</u>
Multiply and Accumulate and Registers	Combine Gilbert Cell + Op amps
Large bitword multipliers	Innovative Circuit topologies
Small bitword multipliers	Basic Gilbert Cell
Large bitword adders	Innovative Op amp topologies
Small bitword adders	Various types of Op amp circuits
Single bit adders	?
Latches and Flip/Flops	? some temporary poor storage
Nands, Nors, XORs, Mux	Op Amps, Analog Mux
Inverters	Op Amps
<u>Function vs. Physical Behavior abstraction</u>	Stay in the physical domain
Pull up with pull down transistor circuit behavior	Ratio of load/driver transistors
Transistor and Device equations	Transistor and Device equations