Introduction to Digital Logic

- N-Bit Muxes
- Load Registers

Doug Shook

Review Questions

- How many 4 input LUTs would be required to implement:
  - 3-bit 2x1 mux
  - 4-bit 2x1 mux
  - 2-bit 4x1 mux
  - 3-bit 4x1 mux

Review Questions

- Consider a load register. If we assume that each logic gate has 2ns of delay, then what is the setup time? The hold time? The propagation delay?
- How does this compare with the registers we've been using?

Review Questions

- Draw a circuit for a 3-bit load register that uses T-Flip Flops instead of D-Flip Flops.
- Construct a VHDL module for a 3-bit load register.

Review Questions

- A computer can be thought of as having four states: off, running, power save, and sleep.
  - Construct an FSM:
    - What are possible inputs?
    - What are outputs?
    - What are the transitions?