OVERVIEW OF ECE 152A LABS

- Lab 1
  - Display A-J on a 7-segment LED display
- Lab 2
  - 3 Adders in Verilog
- Lab 3
  - Up/Down Counter
- Lab 4
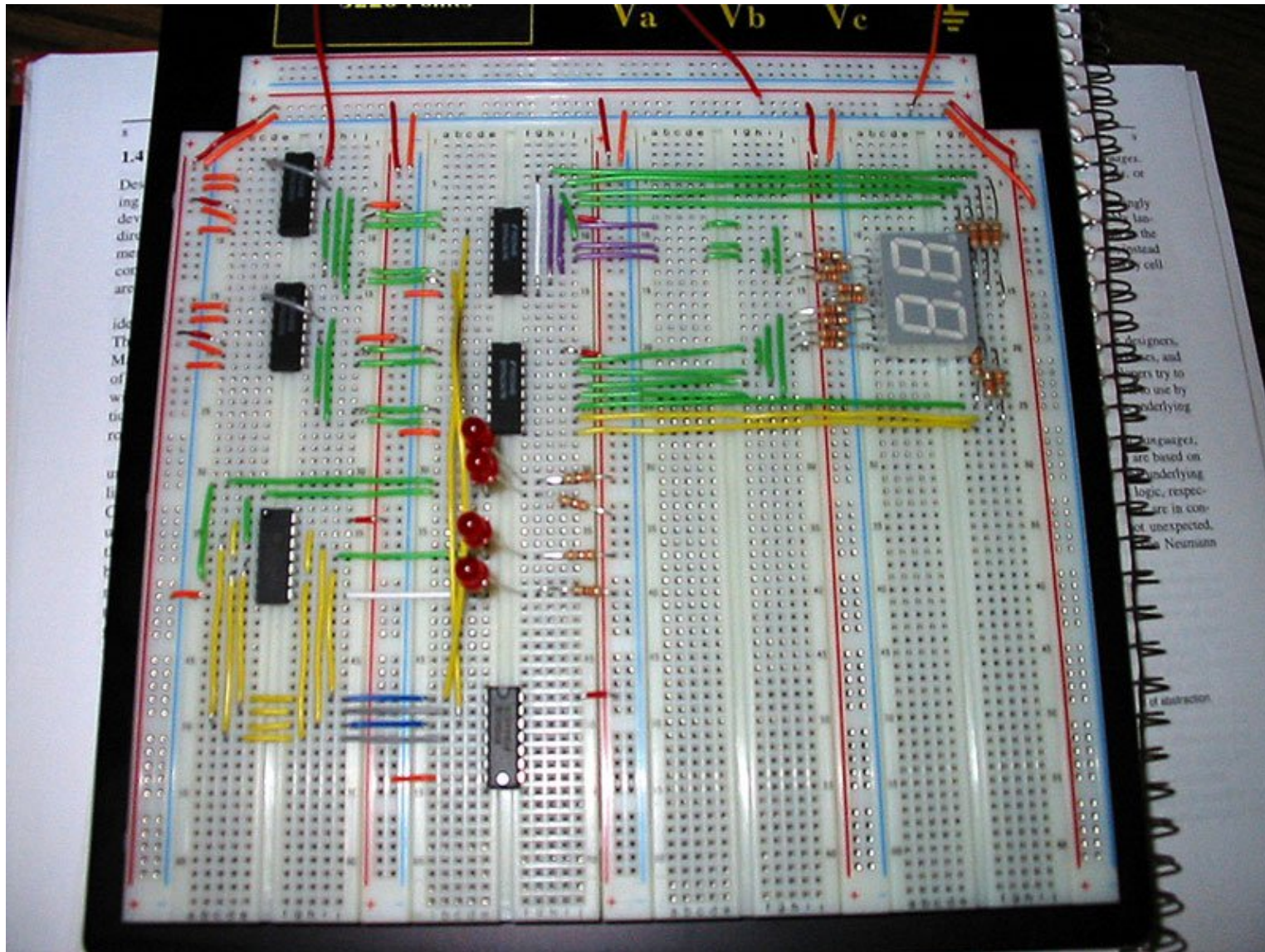 - Ford Thunderbird Tail lights

LAB 1: COMBINATIONAL LOGIC
To Display Letters on 7-segment LED

Design Process:

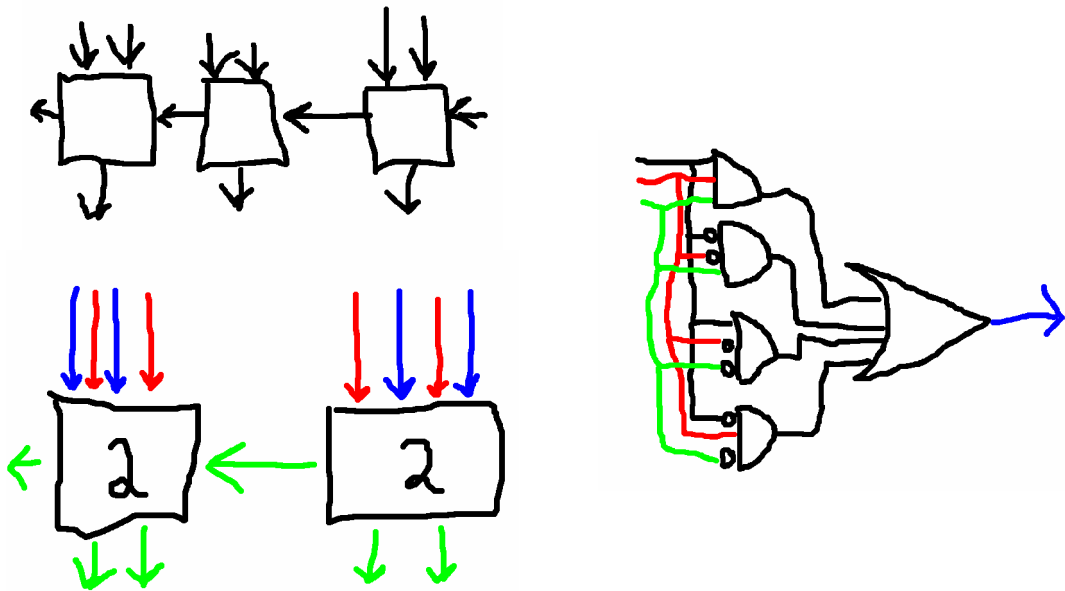Word problem->Logic Equations->Logic Minimization (K-maps)->TTL Design

LAB 1 IMPLEMENTATION
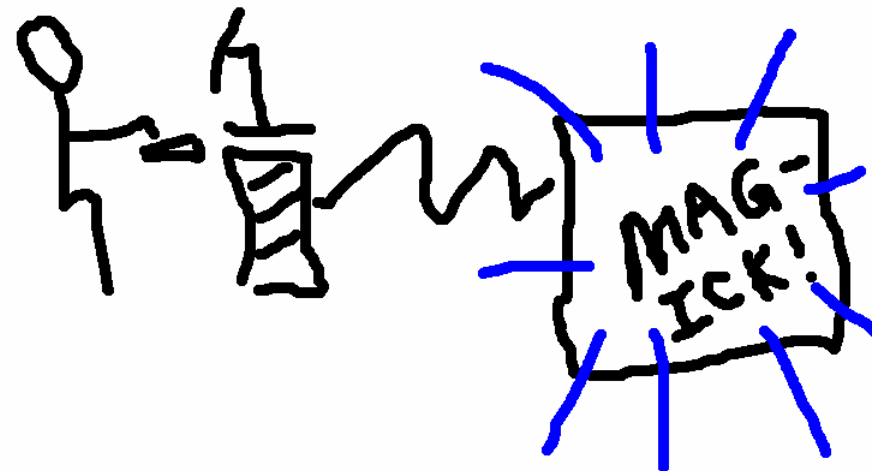
LAB 2: ADDERS
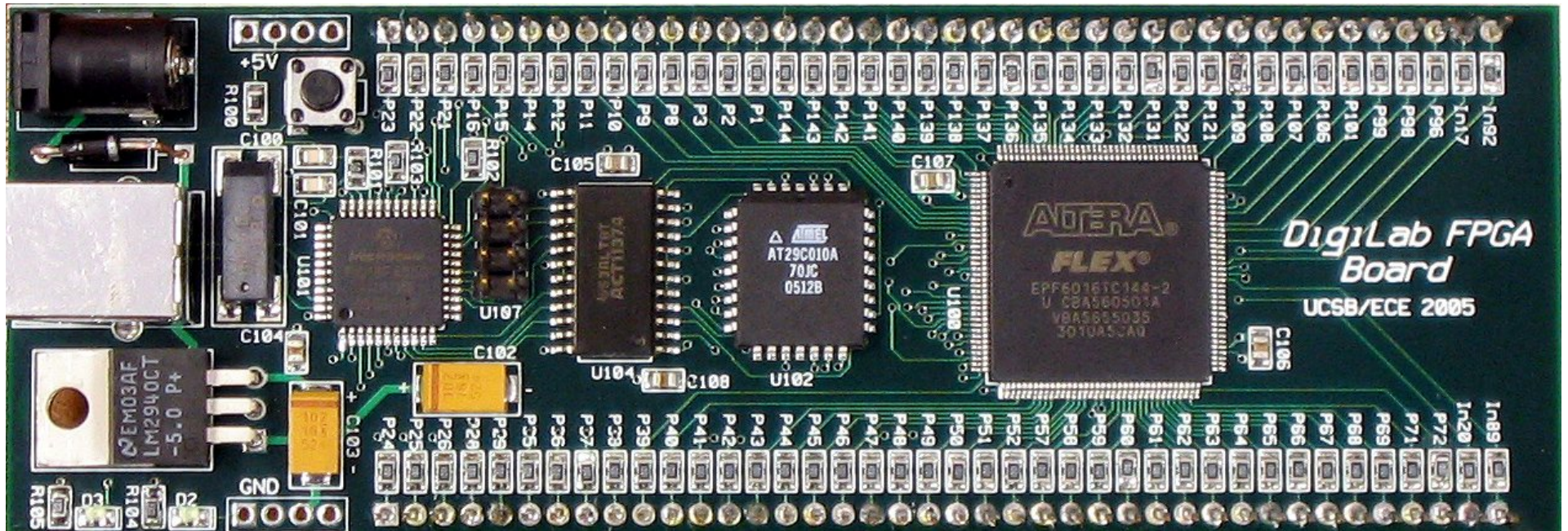# SPACE COMPLEXITY VS. DELAY

- Types
  - Ripple carry
  - And-Or
  - 2-bit pairs

- Implemented in Verilog
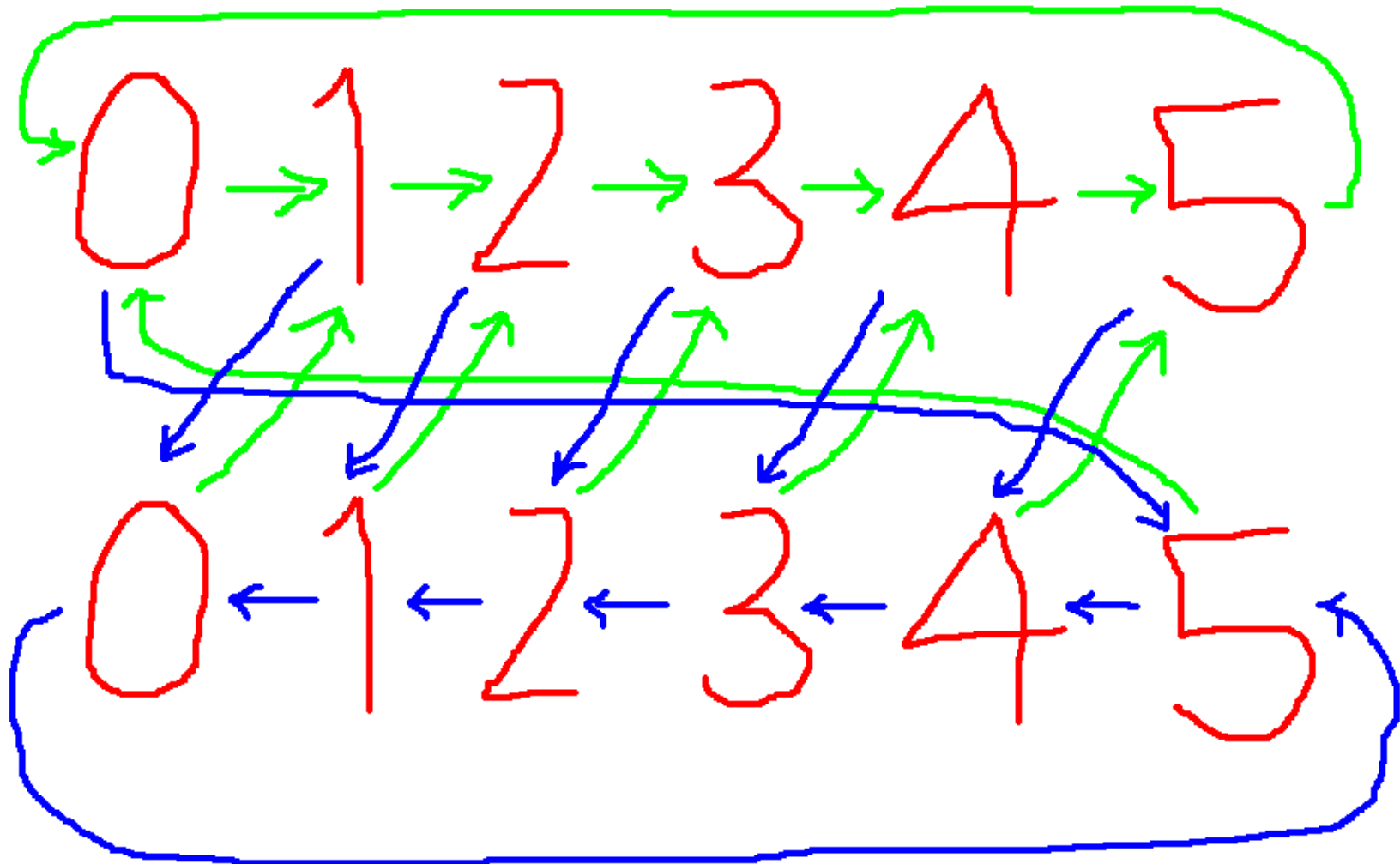
ECE DIGILAB FPGA BOARD

You will be using this FPGA board in Lab 2 (& 4).

Design process:

Design in Verilog->FPGA download

LAB 3: COUNTERS
UP-DOWN COUNTER

LAB 4: FINITE STATE MACHINE DESIGN: Tail-lights of an Automobile

LAB 4: FINITE STATE MACHINE DESIGN: Tail-lights of an Automobile

Left Turn

LAB 4 IMPLEMENTATION