

LogicWorks 4 Tutorial

CSE141L –Summer 2004

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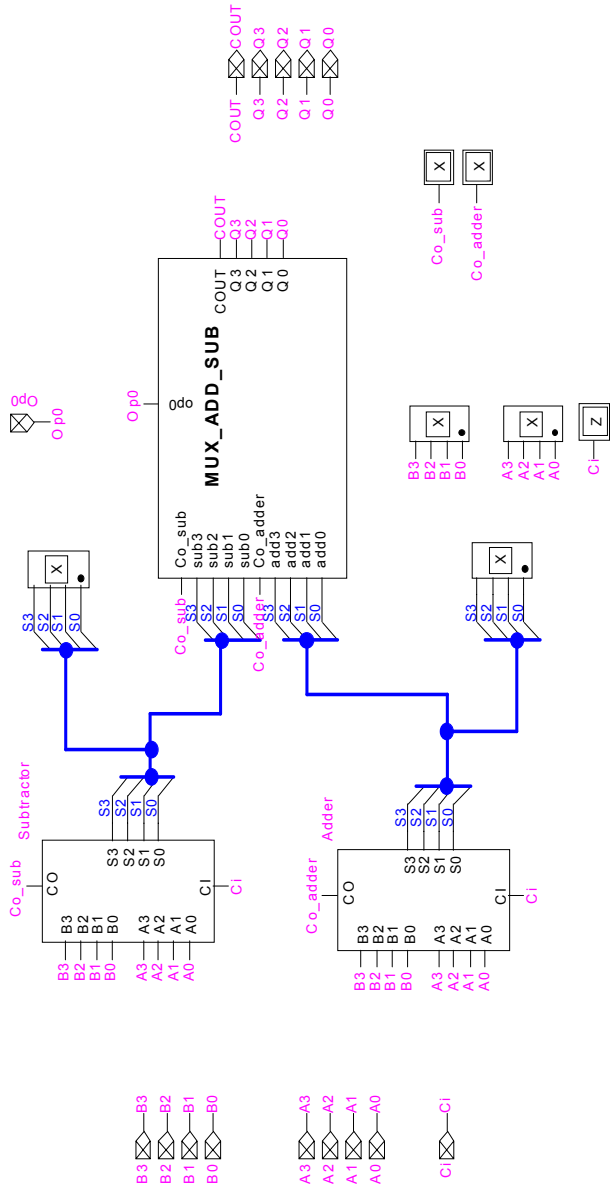
Creating a New Library

- **File -> Libraries -> New Library**
 - ✓ *Save Library* As window pops up
- Go to desired directory
- Create library by entering desired library name (i.e. Lab3Lib)
- **Press Save** button

Creating Part Internals

- Design part and test to ensure that it works.
- Use PortIn and PortOuts to generate I/O pins for the part (Note: These pins must be named)
- Save part (i.e. CalculatorInternals.cct)

Calculator Internals



Creating a New Part Symbol

- File -> New -> Device Symbol
 - ✓ Parts Window appears
- Options -> SubCircuit and Part Type
 - ✓ Part Type window pops up
- Select second radio button (Create a subcircuit symbol and select an open circuit to attach to it).
- Select desired circuit file, press OK, and press Done.

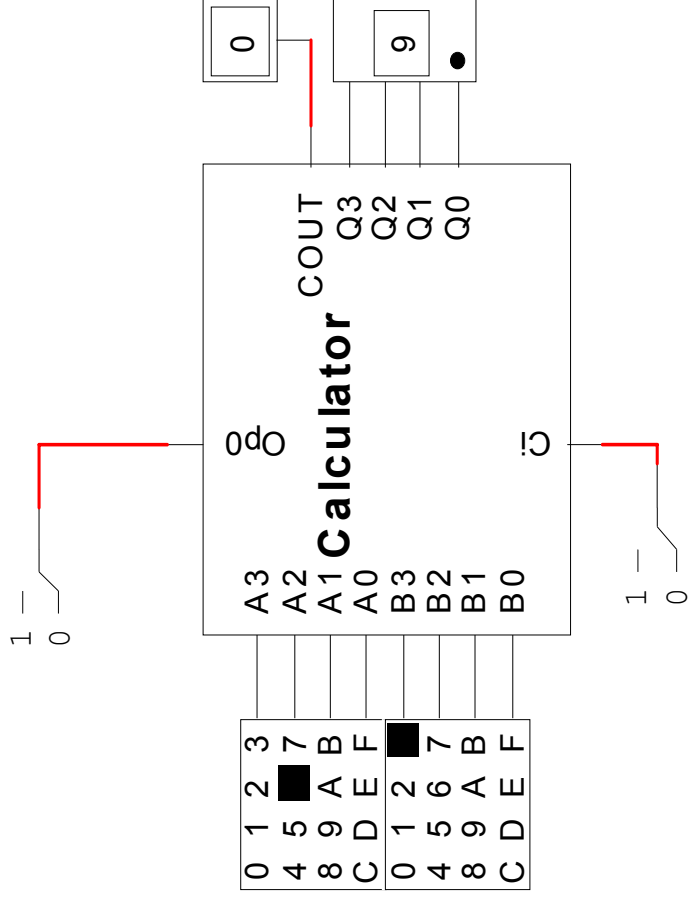
New Part Symbol (cont.)

- Options -> AutoCreateSymbol
 - ✓ AutoCreateSymbol window appears
- Press Extract Pin List button (modify if desired)
- Enter part name in text box
- Press Generate Symbol button
 - ✓ New part appears!

Saving new Part to Library

- **File -> Save As**
 - ✓ Save Part As window appears
- Select desired library (i.e. Lab3Lib). Note: if your library does not appear in list, use the open library button to find your library in the appropriate directory
- **Press Save.**

New Calculator Part



Creating a Bus

- Schematic -> New Breakout
 - ✓ New Breakout window appears
- Enter pin names for new breakout (i.e. for a 4-pin breakout: C0..3)
- Note: Connected busses must have same pin names

Naming Signals

- Name a signal/bus by right clicking on it and selecting Name
 - ✓ Name window appears
- Enter desired name in text box, make sure that the Visible box is checked, and **press OK**.

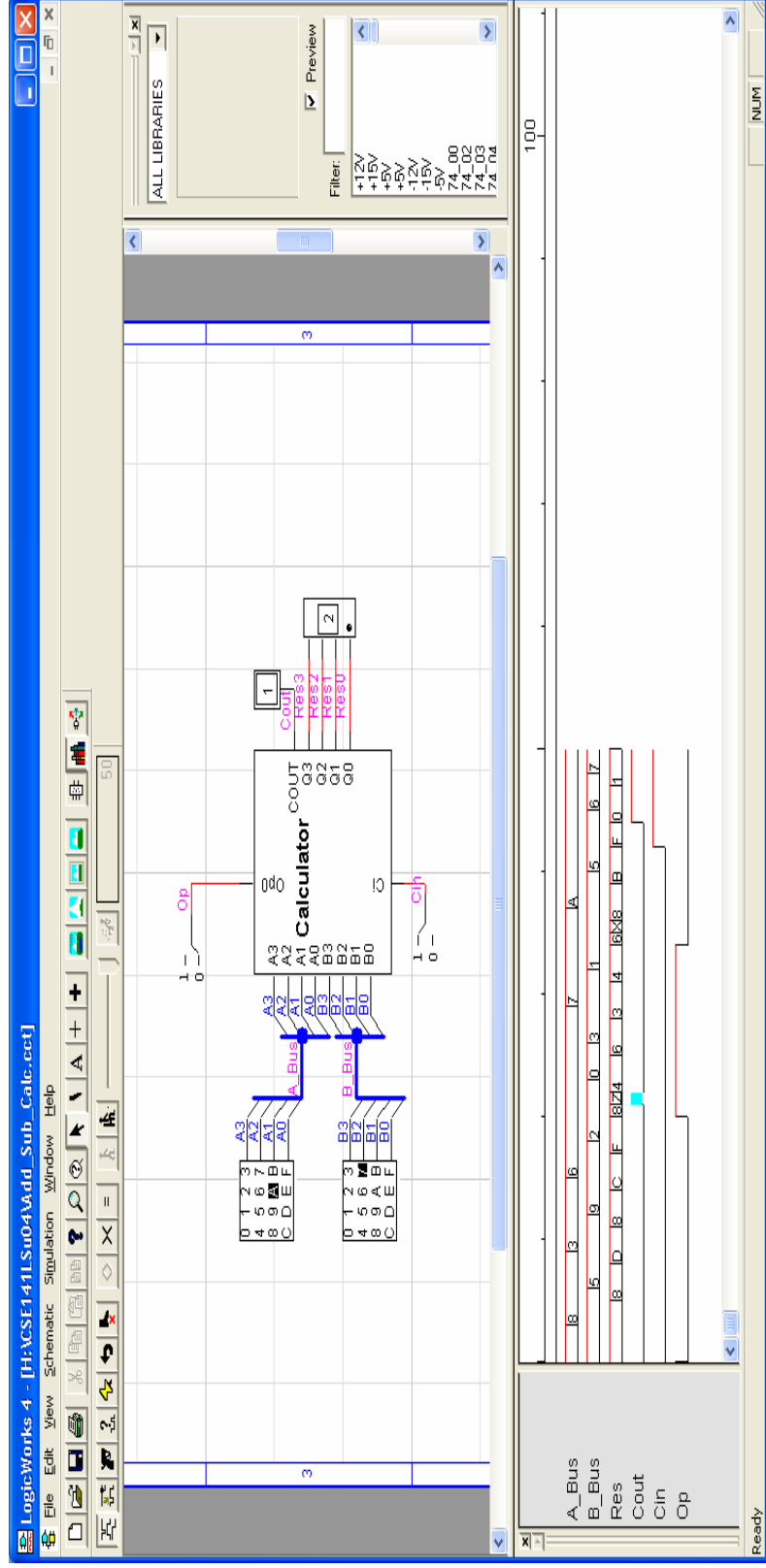
Timing Diagrams

- **Simulation -> Add Automatically** (all signals named from that point on will be automatically added to timing diagram) **OR** select signal/bus to be added and **Simulation -> Add To Timing**
- **Note:** For a signal (a single line or a bus) to be present in the timing diagrams, it must be named.

Timing Simulation

- Simulation -> Reset Simulation
- Simulation -> Run

Sample Timing Diagram



Print Timing

- **Simulation -> Timing Print Setup**
 - ✓ Print Setup window appears
- Select landscape radio button and appropriate printer
- **Press OK**
- Note: Only timing visible in current window will be printed.