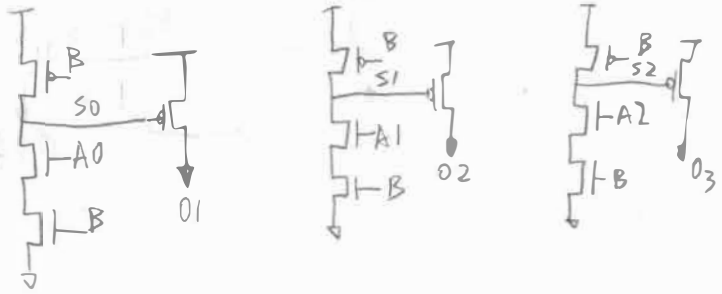
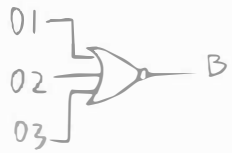
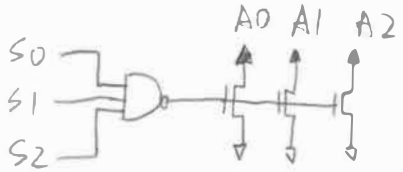
part one

a.







b) 1) Output can only be generated when all input are present, and the output can go neutral before all the inputs go neutral

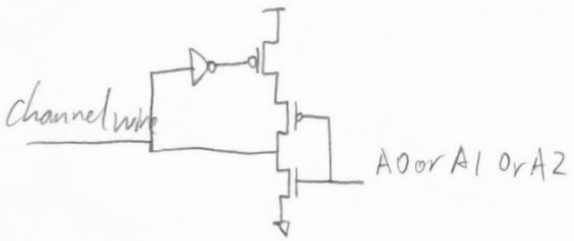
2) the semi weak conditioned template, out put can go neutral before all the input goes to neutral. weak conditioned template, Lock first and then output can go neutral.

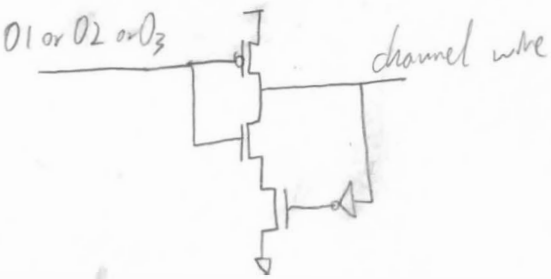
3.) the RCD will fill the gap

C.) FL is the time from input to O1O2O3, from input to output request

BL is the time from O1O2O3 goes through Nor to B and S0S1S2 through nand to input, from output request to input request.

d)





Part Two

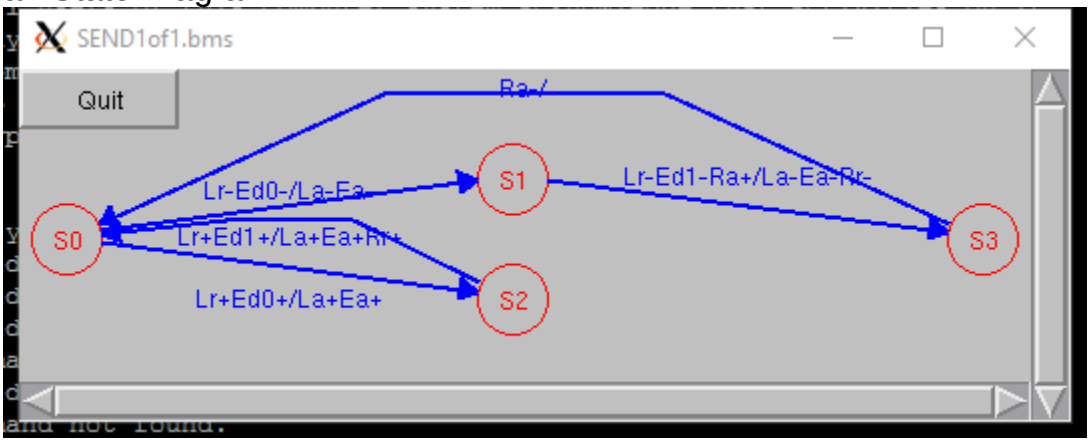
1. Minimalist Setup

   Briefly explain each command we used in Minimalist:

   a. Read-spec: Read the Burst-Mode specification in <file> and store it in <spec-var>, or, if <spec-var> is not specified, 'theSpec'.
   b. min-states: Minimize the states of the Burst-Mode specification in <spec-var>. If <new-spec-var> is present, the resulting specification is stored there. Otherwise, <spec-var> is overwritten with the new specification. If '-F' is specified, assume all outputs are fed back as inputs. If '-H' is specified, the state cover is calculated heuristically.
   c. assign-states: Encode the states of the Burst-Mode specification in <spec-var>. State minimization is typically performed first, but need not have been. If '-F' is specified, assume all outputs are fed back as inputs.
   d. min-logic: Perform 2-level logic minimization on the Burst-Mode spec in <spec-var>. The specification MUST already have been encoded. The state encoding currently in effect for the specification is used.
   e. verify-logic: Verify the logic implementation of the Burst-Mode spec <spec-var>.

2. SEND1of1 Design

   a. State Diagram



b. Minimalist Input:

```
Name SEND1of1

Input Lr  0
Input Ed0  0
Input Ed1  0
Input Ra  0

Output La 0
Output Ea 0
Output Rr 0


0  1   Lr+ Ed1+  |   La+ Ea+ Rr+
0  2   Lr+ Ed0+  |   La+ Ea+
2  0   Lr- Ed0-   |   La- Ea-
1  3   Lr- Ed1- Ra+ |  La- Ea- Rr-
3  0   Ra- | |
```

c. Plot: