

Problem Statement

PODEM (Path-Oriented Decision Making) is an Automatic Test Pattern Generation (ATPG) algorithm. The aim of this project is to implement the PODEM algorithm to generate test vectors for a given fault. Given a circuit and a fault location this algorithm will tell us whether the fault can be detected and a combination of input values which can detect the fault.

The output is a test if one exists, or the indication that the fault is untestable.

Assumptions

- Single stuck at fault
- Code written for 2 input type gates but can be easily extended to multiple input

Input-Output Description

<out node> gate <in node1> <in node2>

Sentence printed on terminal

6 OR 0 1

7 AND 2 3

8 NOT 7

9 OR 4 5

9 NOT 10

13 OR 11 12

14 AND 10 13

-1 end

Enter observable node

14

Enter faulty node

10

Value of stuck at fault 0/1

1

Output obtained is

0 1

1 x

2 0

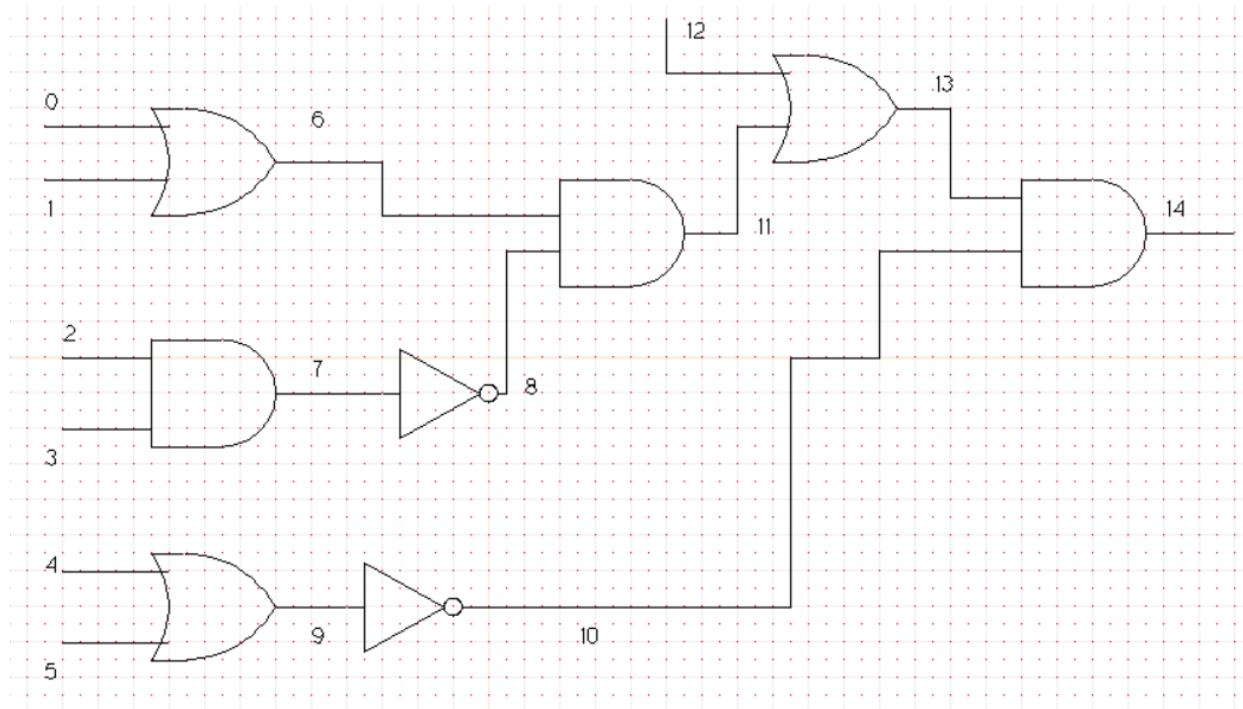
3 x

4 1

5 x

12 x

Circuit Diagram



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