



REVA
UNIVERSITY
Bengaluru, India

TRAFFIC LIGHTS CONTROLLER USING VLSI CODE

ICONIC TEAM PRESENTATION



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AGENDA / TOPICS



Introduction

History



Project Description

Schematic diagram
simulation



Purpose



advantages



Conclusion



INTRODUCTION

History

- ▶ The world's very first traffic lights were invented by JP Knight Installed near London's House of Commons. Which was on the intersection of George and Bridge Street, in 1868
- ▶ **RED:**
- ▶ Come to complete stop at stop line or before crosswalks or intersection
- ▶ **YELLOW:**
- ▶ Stop if you can do so safely
- ▶ **GREEN:**
- ▶ Go, but only if intersection is clear



INTRODUCTION CONTI...

Software used :

XILINX of version 2020.1

Language used :

Verilog



DESCRIPTION

- ▶ They are four directions namely north ,south,east,west
- ▶ When clock pulse 1 and if the north side green color will glow means then remaining sides red color will glow
- ▶ If the south side green color will glow means remaining sides red color will glow
- ▶ If the west side green color will glow means then remaining side red color will glow
- ▶ If the east side green color will glow means then remaining side red color will glow
- ▶ The above process will repeat all the times when ever there is traffic

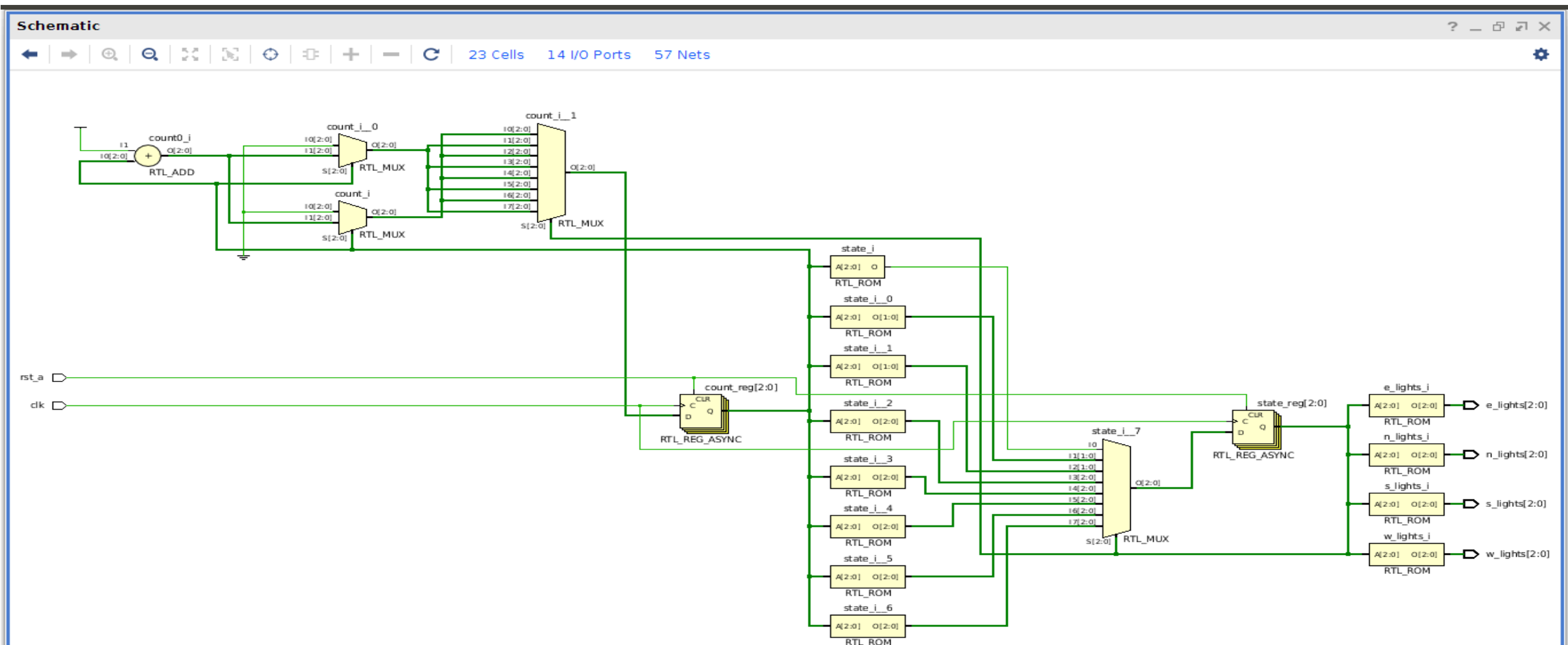


DESCRIPTION CONTI..

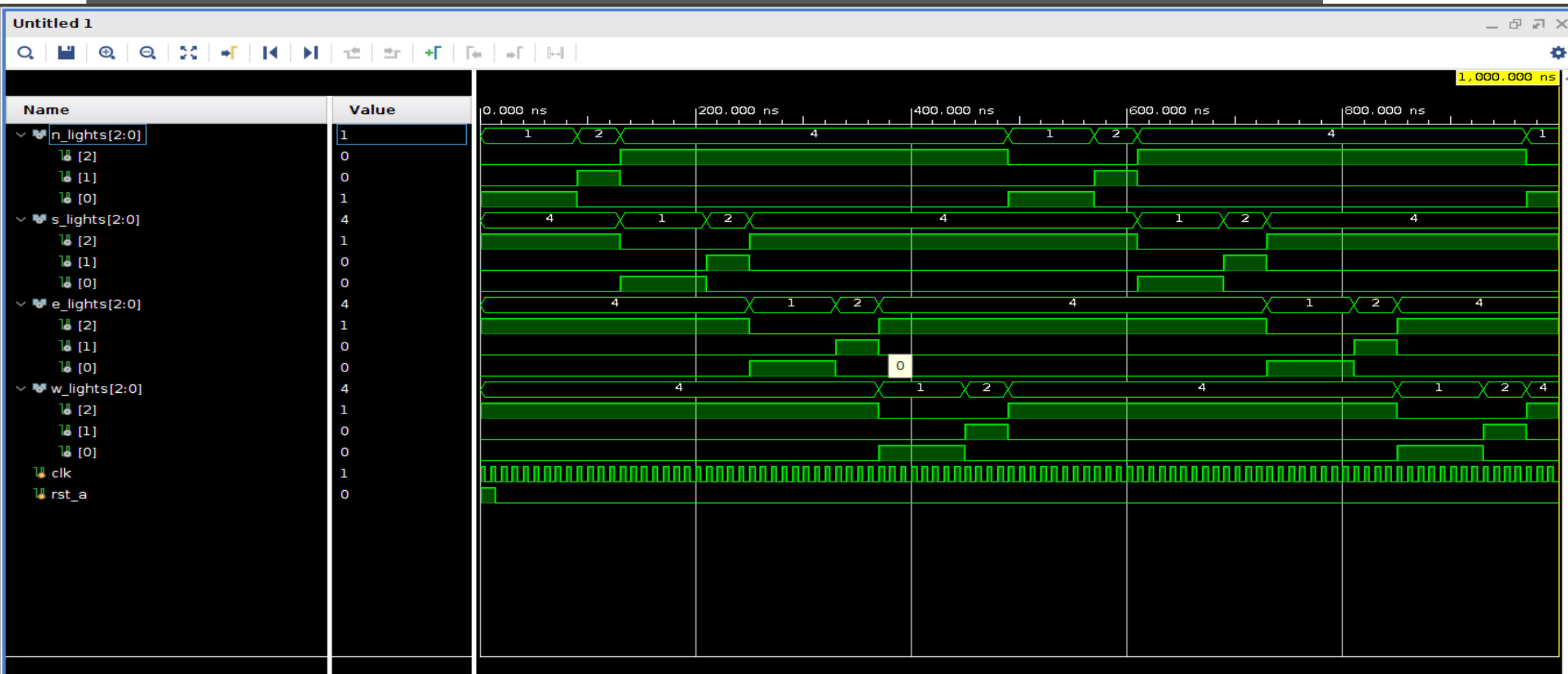
- ▶ According to my code which I used to design it will start from north, its goes to south then east and finally into west it will repeat all the times
- ▶ Here I taken clock and reset as my inputs and north,south,east,west lights ,state and count are output signal.
- ▶ On the reset signal design will enter into north state and start giving output after reset will go low
- ▶ Here out aim is to design an error free traffic control system that safely ,effectively directs traffic for street intersection.



SCHEMATIC DAIGRAM:



SIMULATION



PURPOSE

- ▶ Optimize the traffic flow at network junctions
- ▶ Reduce environmental pollution caused by traffic
- ▶ Most importantly increases road safety



ADVANTAGES

- ▶ Low power consumption.
- ▶ Easy to implement
- ▶ Speed of operation.



CONCLUSION

- ▶ Leading to low power and area efficient design. In addition to the general procedure XILINX tool gives the flexibility in verification for the design with large number of inputs and outputs.
- ▶ The concern is minimization of traffic congestion, better regulation of traffic and minimization of travel time



THANK YOU



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