

Traffic Lights Project

Concept Document

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For this project, I have decided to make traffic light simulation. I was inspired because of the current Nepalese Traffic System. There are not any traffic lights system in Nepal, so Nepal faces a of traffic problem and a lot of people died because of accidents at intersections every year. I wanted to learn at least design part of Traffic Light in hope that I will return to my country and help in construction of traffic lights which will ease the flow of traffic and pedestrian crossing at road intersections.

Let me get to the History behind the invention of Traffic Lights

In early of 1912, one officer had the idea of traffic light and it just had the red and green color, and rather having yellow light, they used to emit buzzing sound to alert to stop, look and go. Later with the easy of electricity, the first traffic light was installed during 1914 at Cleveland Ohio. However, those early lights had to be manually operated by a man for switching the colors. So as the years were passing by and because of advancement of computers and different simulation software's in mid 1900s, people used that as an opportunity for evolution of traffic lights to change more efficiently and reliably. The traffic lights were fully automated by using software's, so it was being widely used by transportation departments in many countries for controlling their traffics in road.

After knowing the history, I was inspired to learn the working mechanism. That is why I worked on the simulation of Traffic Lights. LabVIEW was really a great platform for working in simulation of traffic lights. I designed the traffic control for 4-way intersection. So, there are one traffic light system for each East, West, North and South Lane in total of 4. I have three main lights i.e Green, Yellow and Red along with Left Turn Signal and pedestrian signal. Therefore, it is more of real like simulation for real traffic control. And I hope I will work for department of road and transportation to build real traffic lights someday in future.