INTERNET OF THINGS
18CSW379T
MINI PROJECT

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SMART TRAFFIC MANAGEMENT SYSTEM

(SMART CITY)

SMART OBJECT (components)-

1.Power supply

2.Sensors

3.Actuators

4.CPU (low power)

5.Memory

6.Communication device

IN OUR MANAGEMENT SYSTEM WE ARE USING 2 POWER SOURCES-

1.**AC power supply as used by traffic lights (PRIMARY) -**The traffic signal power supply is an electrical device in the control cabinet that converts AC to correct DC voltages for various devices in the traffic signal cabinet. The power supply cable travels underground.

2.**Solar panels (DC battery powered) backup (SECONDARY)-** When utility power is not available, UPS or BBS can provide emergency power to connected equipment by supplying power from a separate source (i.e., batteries).

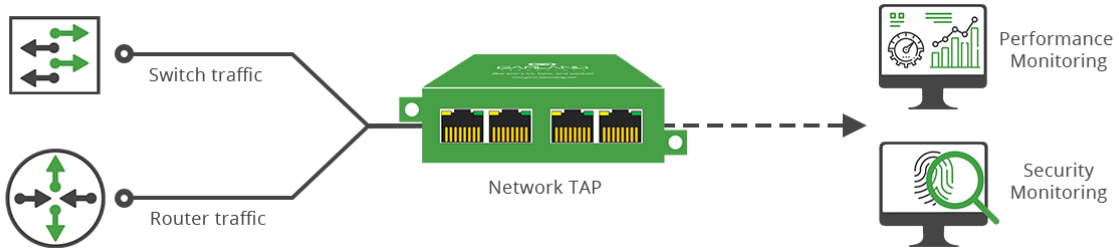
<u>SENSORS FOR TRAFFIC MANAGEMENT</u> -

1.**TRAFFIC ROUTER** - It senses the presence of a nearby NIC installed in an emergency vehicle and sends the data to the Actuator (traffic access point) for further action.

2.**TRAFFIC CAMERA –** The role of the camera is to capture the image of the number plate of those vehicles which is trying to break the privilege reserved for emergency vehicles.

<u>ACTUATORS USED FOR TRAFFIC MANAGEMENT</u> –

TRAFFIC ACCESS POINT (TAP) – Its function is to switch the traffic light, instructed by a traffic server in the presence of NIC.



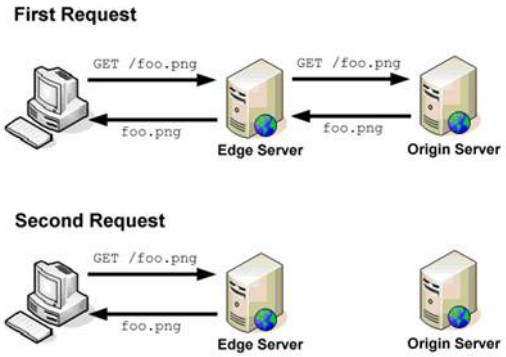
<u>TINY LOW POWER COMPUTER FOR TRAFFIC MANAGEMENT</u> –

TRAFFIC SERVER- Its role is to do all the logical operation perform for traffic management,

Like-

a) Managing the traffic light as usual.

b) Grant permission to switch signals according to capture data.



<u>MEMORY</u>-

TRAFFIC SERVER-

a)- To store the logical code which is used to perform different operations in the traffic management.

b)- To store the captured images from the camera.

<u>COMMUNICATION DEVICE</u>-

TRAFFIC ACCESS POINT (TAP)- It act as an intermediary link between-

a) Router and NIC
b) Router and traffic server
c) Between different traffic signals