Introduction:

The effect of traffic jam also effects the operation of ambulance. To avoid the traffic jam for the ambulance, a new idea is developed.

Authors proposed a new concept to avoid traffic jam for the ambulance and thus saving the life of an

individual.

At first the ambulance is detected and the information about the arrival of the ambulance is sent to the next station.

The ambulance will make siren only when it carries patient inside, so by detecting both the ambulance siren and the image taken from the acquisition device, the information is sent to the next point which is on the way to hospital.

Announcement of the arrival of the ambulance is done. The CCTV camera is monitoring each vehicle on that road.

Motivation:

Road traffic control is one of the important and challenging areas which involve directing vehicular and pedestrian traffic around a construction zone, accident or other road disruption, thus ensuring the safety of emergency response teams, construction workers and the general public. Traffic control is an outdoor occupation, where an individual has to work night or day for long hours in all weathers, and is considered a dangerous occupation due to the high risk of being struck by passing vehicles.

Due to this there exists a lot of traffic on road which will affect the daily life of an individual. Lot of time and effort is wasted by spending time on road. The patients struck in the traffic will have to suffer a lot and this may threat their life too.

Proposed system:

1. With the CCTV and an microphone, which continuously monitors the traffic and sends the information to the processor for further processing.

2. The image processing algorithms are implemented to detect the presence of the ambulance and audio processing is done to detect the siren. Once when the vehicle is detected, necessary signal is transmitted to the next station through internet to indicate the arrival of the ambulance.

3. The announcement of the ambulance arrival is notified by the speaker and all the vehicles are insisted to make way for the ambulance.

4. A camera is installed to keep track of a vehicle which does not follow the announcement and image is captured and number plate is extracted and owner information is passed on the nearest police station through internet to take further actions.

5. Minimum of one parameter is sufficient to identify the vehicle, that is the image of the vehicle. By this we can differentiate between the ambulance and other vehicles.

System design & implementations:

The proposed system is designed and implemented using matlab. Image processing algorithms are used to do the necessary processing at the station. Processing involved operations such as detection of the vehicle, data transfer number plate detection and reporting etc. MATLAB script is written and simulation results are obtained. For detection of the ambulance, image processing tool box are used and the open source codes are modified for the application. The data transfer between the two stations is demonstrated by using two computers which communicate through internet using TCP/IP. Cloud computing is used to store and control the information data and for further processing.

MATLAB to do image processing and audio processing.

Image processing steps:

Conclusion:

There are many vehicles, which do not follow the announcement made and just neglect the situation. In order to eliminate this kind of behavior and take necessary action against the rule, violators, we have the separate system. The proposed concept will greatly help in controlling of the traffic and also saves the life of an individual. Future scope include implementing the verified scripts on to the digital signal processors and deploy in the real traffic environment.