Using IPv6 to Help Traffic Conditions

Current Traffic Conditions

A majority of traffic-related accidents nowadays happen at intersections. Traffic lights are a major component of traffic controlling. We thought, if there is a problem with these traffic lights, there are various consequences that result from it.

### Avoiding and Preventing Accidents on Roads

Currently, a person operates a car, and obeys a traffic light to control traffic. The largest factor here would be the person himself. This of course, creates accidents. So what can we do? We can avoid people from controlling the car in intersections. This is when IPv6 comes into play.

How we used IPv6

In an intersection, one can change direction of travel. Who obeys the direction of travel? The driver and a GPS car navigation system. I believe that this requires an <u>IP address for the car navigation system.</u> For the intersection, there can be something like a wireless LAN system that could transmit wirelessly through a traffic controlling server. When the car nears a traffic controlling server, and the data is sent to the car about which way to turn, a car navigation could follow the instruction of the server and for example, stop the car itself.

Remaining Problems

If a car coming up to an intersection is controlled by a traffic controlling server, there remains still, a large problem. There are still the safety of the pedestrians and bicycles. For this, there could be the typical buttons that people press when they want to cross a road, or a thermo-graphic device that could detect people. If the server detects a person, the server could tell the car to stop to prevent the car from hitting a pedestrian or a bicycle.
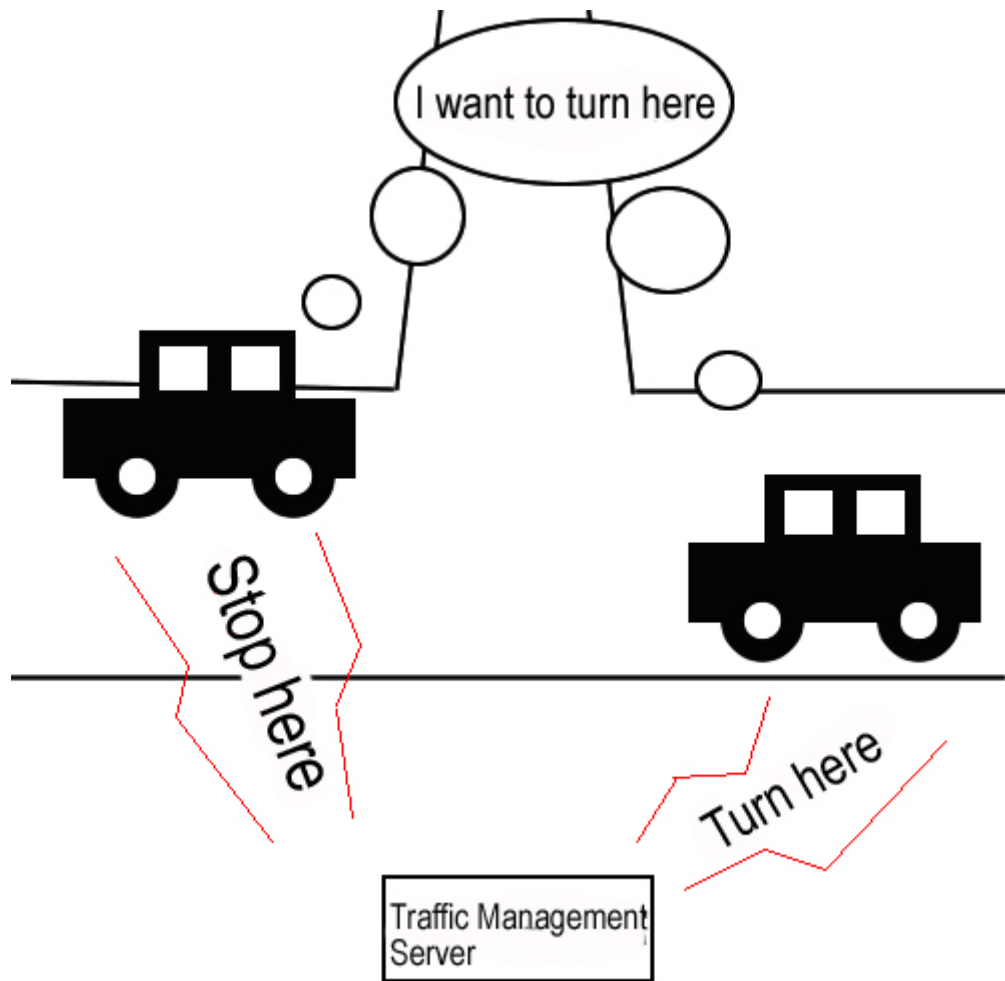
Collateral Effects

To lessen the amount of traffic-related accidents, the car itself can have an IP address. When we asked ourselves if there are any benefits other than accidents, there was something big. This can help avoid traffic. If each car has a unique IP address, and the GPS car navigation system could determine the destination, it would be possible to determine what traffic conditions would be in each location. This could prevent, and predict heavy traffic situations.

If this system is successful, use of cars would be safer, and comforting.