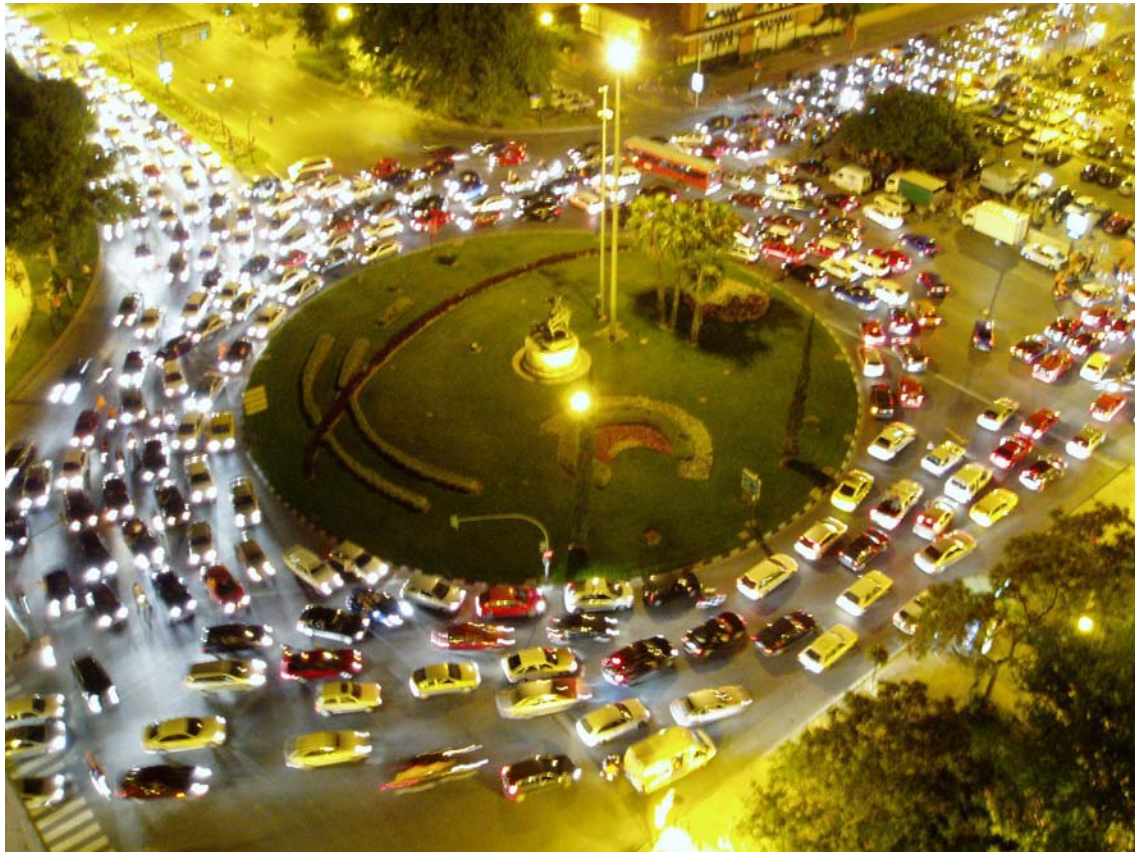
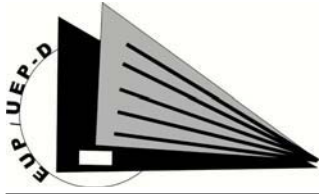


# PEAJE URBANO Y SEMAFOROS INTELIGENTES



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## SINOPSISIA

Mugikortasuna gure eguneroko bizimodua baldintzatzen duen faktore garrantzitsu bat da. Mugikortasunarekin loturiko arazoak nabarmen hazitzen doaz urteen poderioz. Hiri barneko mugikortasunaren hazkundeak hiriko zenbait arloren garapena ekartzeaz gain, hiritarrari zuzenean eragiten dioten ondorio kaltegarri batzuk ere ekarri ditu: auto-ilarak, energia kontsumoaren igoera, ingurugiroaren kutsadura, kontaminazio akustikoa,...

Arazo hauek ohikoak ditugu gure inguruan eta Donostiako kasua hartu dugu erreferentziatzat, bertako mugikortasunaren egoera kaxkarra pairatzen baitugu askok eta askok. Honi guztiari aurre egiteko asmoz, kotxearen erabilera murriztu, eta honekin batera kutsadura ere bai, bi ideia nagusitan oinarritu gara:

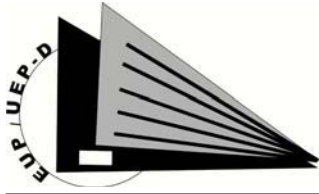
-Hiri barneko peajea.

-Sentsoredun semaforoak.

Hiri barneko peajea, eremu mugatu batean mugitzen diren ibilgailu mota konkretu batzuei ezartzen zaien tasa bat da. Honen teknologia eta aplikazioari dagokionean, gure ideia erdigunerako sarbide guztietan kamera batzuk jarriz bertako mugimendu guzti kontrolatzea da. Tasa hau, Donostiako erdigunean ezartzea erabaki dugu, ikerketa bat egin ondoren hiriko eremurik kaltetuena hau dela ikusi baitugu.

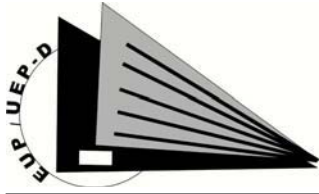
Kamera hauek, kontrolatutako eremuan zirkulatzen duten ibilgailu guztien aurreko eta atzeko matrikulak grabatzen dituzte. Gaueko hamabiak iristen direnean, informazio hau konputagailu batera bidaltzen da eta honek, grabaturiko ibilgailuen zerrenda bat osatzen du. Ondoren, zerrenda hau, eremu horretan ibiltzeko ordaindu duten ibilgailuen zerrendarekin alderatzen da. Azkenik, trafikoaren burutzaren laguntzaz, ordaindu ez duten ibilgailuak identifikatuko dira eta hauek isun bat ordaindu beharko dute. Ibilgailu mota guztiek ez dute peajearen tasa berdina ordainduko, honetarako ibilgailu hauetako bakoitza identifikatu beharko delarik. Lan hau egiteko bi modu ditugu aukeran: ibilgailuetan itsasten diren pegatina bidezko identifikazioa edota laser bidezkoa.

Honetaz gain, sentsoredun semaforok ezartzea ere proposatzen dugu. Ideia honekin lortu nahi duguna trafikoaren arinkortasuna lortzea da. Honetarako, errepide azpian ibilgailuen presentzia detektatzen duten sentsore batzuk kokatzen dira semaforoaren gelditze lerroa baino



segundu batzuk lehenago. Semaforo berezi hauek auto-ilara gehien sortzen diren kaleetan ezarriko dira.

Bi neurri hauekin, Donostiako mugikortasuna hobetzea espero da hainbat arlotan. Alde batetik, trafikoaren arinkortasuna lortzea da helburu nagusia. Bestetik, ibilgailu pribatuaren erabilera murriztuz, garraio publikoa sustatzea da gure xedea; honela, kutsadurari aurre eginez Donostiako biztanleriaren bizitza maila hobetuko baikenuke.



## SYNOPSIS

Mobility has a big influence in our lives. The problems that are associated with mobility are increasing every day. The increasing of mobility in cities cause the urban development, but it brings problems that influence directly to the people who live in these cities, such as pollution, collapsed, the growing of the energy consumption, noise pollution...

Those problems are usual around us, and we take as a reference the case of Donostia – San Sebastian because here the mobility is not as good as we would like. IN order to solve this problems, reducing car pollution, contaminating less... we suggest two ideas:

- Urban toll.
- Traffic lights with sensors.

The urban toll is a tax that pays specific vehicles that move in a limited zone. In reference to the technology and application, our idea is to install some cameras in all the approaches to the centre of the city to control all the movements. We have decided to put this tax in the centre of Donostia because after having made an study we have seen that this is the place where more problems are.

Those cameras record the front and the back registration number of the vehicles. After midnight, this information is sent to the mainframe, this takes out a list of the vehicles that have moved in the toll that day, and this list is compared with another list where the vehicles that pay to enter in the limited zone appear. With the traffic headquarters the vehicles that have moved in the zone but don't pay will be identifies and they will have to pay a fine. Different types of vehicles will not have to pay the same price. We have two possibilities to identify the types of the vehicles: stickers with different colours to stick in the car and the laser method.

Apart from this, we have thought to install traffic lights with sensor. With this idea we want to increase the fluency of the traffic. Before the stopping line of the traffic lights we install sensors under the road, in order to detect the presence of the vehicles. With this sensor we want to finish with collapses, so we are going to put them in the streets where the problem is very big.

With this two ideas we want to improve the mobility in Donostia. On the one hand we want to improve the fluency of the traffic. On the other hand, we want to reduce the utilization of the private vehicles and we want to achieve our aim, the use of the public transport. In this way we can reduce the contamination and we improve the quality of life.