## STARS!

Students acting to reduce speed
Final report


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## 1.INTRODUCTION

On the grounds of increasing the number of car accidents, as Traffic Police Officers, Daniel and myself decided to take part to the European program of reducing speed and traffic measures towards decreasing the number of injuries amongst drivers, occupants and pedestrians.

Eventually, at the beginning of 2010, when the ETSC crew arrived at our university- The Police Academy, in Bucharest, we decided to come to our teacher with the pilot idea of reducing speed and implementing safety measures, in order to receive a piece of advice, and why not, the technical and juridical support. So, we named our idea "Cat's Eye", and went on with developing the project. At first, we gathered necessary information, located a specific spot for implementation and started looking for sponsors.

With the help of Traffic Police Department of Zalau, Salaj County, represented by Mr. Vasile Sabau (chief of dept.) and Mr. Clitan Remus, we managed to determine the exact road section where we were to implement our project (the European road E61, between Romanasi and Poarta Salajului), segment of road with several accidents in the past two years, having as main cause- the speed.


Picture taken from http://maps.google.com/


Picture taken by us, before the implementation of the project, at the spot.


Picture taken by us, before the implementation of the project, at the spot.


Picture taken by us, before the implementation of the project, at the spot.


Picture taken by us, before the implementation of the project, at the spot.

As we went on with developing our project, during the next months at that time, with valuable help from our teacher and the Police Academy, we achieved support from very important authorities, as partners in our future project, institutions like Ministry of Interior, Ministry of Transportation, GRSP, Local Authorities, and , of course, ETSC.

The next step we had to follow with our pilot idea was a global analysis of the project's effectiveness, costs, implementation period and specific impact on the speed and drivers' behavior.

Finally, with these steps covered, we reached the most difficult moment of the development - the money.
During one week, with special thanks to Mrs. Iustina Diaconu and our teacher, Mr. Andrei Ignat (Lieutenant-Colonel at the Traffic Police Dept. in the Police Academy), we found our sponsor- Mr. Mircea losif, manager at ING. Tehno Proiect. So, once we had the OK from Mr. losif, we started achieving the reflecting buttons, which we called "Cat's Eye", as the title of our speed management project.



Reflective buttons- different shapes and colours.

## 2.The Project - "Cat's Eye"

The project itself consists of several reflective buttons inserted in the road texture, either along the road markings (in order to increase visibility on the road/lane), or across the road/lane (in order to inform, prevent and capture the driver's attention about the dangerous sector he is approaching to, which means he would reduce speed and act much more carefully).

At first, in our imagination, the implemented project should have looked like in the picture below:


Picture downloaded from the internet.

At the end of the implementation, and, of course, after all the hard work and dedication for the project, with the inestimable help from all our partners, the final phase of the project's implementation looks like in the pictures below:


Picture taken by us, after the implementation, in the project's final form.


Picture taken by us, after the implementation, in the project's final form.


Picture taken by us, after the implementation, in the project's final form.


Picture taken by us, after the implementation, in the project's final form.


Picture taken by us, after the implementation, in the project's final form.
So, in order to explain you how we reached the final phase of the implementation process, we would like to show you some of the pictures taken with us and our partners supporting our project.





As you already figured, the results can also be seen in pictures, particularly like Confucius said "one image stands for ten thousands words"...


In the picture: Mr. Mircea Steriu, Mr. Remus Clitan and us.


Picture from the midterm evaluation.



Now, that the project has been successfully implemented, the next measures we took as publicity and informing the people - traffic participants (drivers, pedestrians, cyclists etc...) we made a press article which, with the help of local mass-media company, appeared in the newspaper and also supported comments on the internet.

The first article, which we released immediately after the project was ready, meaning the midterm evaluation, appeared on the internet as following:

Editia Nr. 1807
Marti, 3 Mai 2011

## S-au montat butoni rutieri pe două trasee din Sălaj

un articol de Cristina PUIE
7 Aprilie 2011
Avand in vedere numărul mare al accidentelor rutiere grave petrecute intre localitățile Poarta Sălajului și Romanaşi, precum şi intre Hereclean şi Badon, la nivel de judeţ a fost implementat un proiect de siguranţă rutieră denumit „Ochi de pisică". Scopul principal al proiectului este reducerea vitezei, principala cauză generatoare de accidente rutiere prin aplicarea pe partea carosabilă a unor butoni rutieri de culoare alb-roşu. Rolul acestor butoni este de delimitare a sensurilor de circulație şi reducere a vitezei, dar şi de sporire a vizibilității, in special pe timp de noapte, in condiții de ceaţă şi in condiții de vizibilitate redusă. Comisarul de poliție Remus Cliţan a declarat că butonii reflectorizanți au fost montați pe cele două trasee amintite, urmand ca de acum incolo să se vadă şi rezultatele. De menționat ar fi şi faptul că bazele acestui proiect au fost puse in cadrul taberei STARS (Students Acting To Reduce Speed) organizată de ETSC (Consiliul European Pentru Siguranţa in Transporturi), organizată anul trecut, la Bruxelles. Butonii rutieri au fost achiziționați cu sprijinul SC Ing Tehno Proiect SRL (Bucureşti) care a suportat costul de achiziţie a acestora.

## Comentarii articol

## Spune-ti parerea

nu conteaza//7 Aprilie 2011 7:50
ar trebui sa va fie rusine ca va laudati cu munca altora
meritele sunt a le lui chiba daniel student la academia de politie din bucuresti care aparticipat la acest proiect si a fost la Bruxelles pentru acesta unde a si castigat

Mircea IOSIF/Articol incomplet si incorect/14 Aprilie 2011 3:37
Incalificabil de rusinos ca nu sunt mentionate numele celor 2 studenti, Chiba Daniel si colegul sau Radu de la Academia de Politie Bucuresti, care au muncit efectiv la acest proiect de A la Z.

Sunt sponsorul proiectului si am dreptul sa stiu de ce este prezentat acest proiect ca o realizare locala si nu ca realizarea unui proiect european, asa cum este de fapt. Nu bazele au fost puse acolo ci intreg proiectul este sub egida ETSC.
Article downloaded from the newspaper's website.

## 3. Evaluation

Between this moment and the final evaluation, which we hope can be understood from the present Final Report, we have been collaborating continuously with the Traffic Police Department. As the results of this collaboration, the Police gave us a periodic situation regarding accidents in the areas we treated. To our surprise, the segment of road (E61, between the villages mentioned in our introduction) is no longer a "black spot", as it used to be considered before the project's implementation.

The Black Spot's definition is the road segment with 1 km length, in which during a period of 5 years there took place a variable number of car accidents having the same generating cause (speed- in this case) resulted in 8 deaths minimum.

For this fact we attached a piece of an official document we received from the police, describing in detail the accidents in the specific area.

Also, we have several radar speed recordings that prove the decrease of speed on the 1.1 km length segment, where our "Cat's Eyes" have been implemented.

As another method of evaluation, we questioned the traffic participants, who declared that are contented with our idea, and that they felt safer driving through the specified area.

Still, among the previous evaluation phases, we would like to link the second press article that appeared in the local newspaper:
"Doi studenti au pus capat accidentelor pe traseul Romanasi - Poarta Salajului
un articol de Paul Gorgan (25 Iulie 2011)


Traseul Romanasi-Poarta Salajului a fost considerat de catre Politia Rutiera punctul negru al judetului datorita numarului mare de accidente grave si mortale care s-au produs pe acest segment de drum din cauza vitezei. In urma implementarii proiectului Cat's eye (ochi de pisica), tronsonul Romanasi-Poarta Salajului nu mai este considerat punct negru, pentru ca dupa montarea butonilor rutieri reflectorizanti nu s-a mai produs niciun accident rutier. Proiectul a fost conceput de catre doi studenti ai Academiei de Politie, Chiba Daniel Gabriel si Leonte Radu, ambii din Salaj, care au realizat acest proiect in cadrul taberei Stars de la Bruxelles, sub egida Consiliului European pentru Siguranta in Transporturi.

Seful Serviciului Rutier Salaj, comisarul sef Vasile Sabau, spune ca butonii reflectorizanti de culoare alb-rosu montati pe tronsoanele Romanasi-Poarta Salajului si Hereclean-Badon au dat rezultate in ceea ce priveste reducerea vitezei. Fiindca viteza este una din cauzele principale generatoare de accidente rutiere, reducerea acesteia a condus si la reducerea gradului de victimizare rezultat din accidentele rutiere, care, dupa implementarea proiectului, este zero pe cele doua tronsoane amintite, a declarat seful Politiei rutiere din Salaj. Pentru a vedea perceptia soferilor vizavi de acesti butoni reflectorizanti, mai multi participanti la trafic au fost chestionati daca la vederea acestor butoni rutieri au redus viteza. 60 la suta din soferi au raspuns ca au redus viteza pe timp de zi si 90 la suta au redus viteza pe timp de noapte, deoarece s-au speriat la vederea lentilelor reflectorizante. Mai mult, soferii se declara multumiti de montarea acestor butoni pentru ca le sporeste foarte mult vizibiliatea pe timp de noapte si ceata, care este frecvent intalnita pe aceste segmente de drum. Aceste rezultate favorabile reies din statistica cu privire la viteza si numarul de accidente a Serviciului Rutier Salaj.

Acest articol a fost accesat de 835 ori "
Copied from http://www.graiulsalajului.ro/index.php?cmd=articol\&idart=24188


#### Abstract

As it results from the article and from the Traffic Police Dept. headmaster's declaration, during daytime-60\% of the drivers decelerated speed, and during nighttime-90\% of the drivers reduced the speed.


## 4. Results

The results of the project can be seen as well from the evaluation phase, and also applying an objective measure-radar recordings of the drivers' behavior and speed. For this, we present some screenshots from the radar small films that the police provided to us.


Before the implementation of the project.
As you can see, in the up-right corner is the patrol's speed ( $71 \mathrm{~km} / \mathrm{h}$ ), and the target (the BMW in the picture) drives with $116 \mathrm{~km} / \mathrm{h}$. The date is also shown ( $10^{\text {th }}$. February. 2011)


Here we have another speedy driver coming ( $84 \mathrm{~km} / \mathrm{h}$ in curve).
$T 75 \mathrm{~km} / \mathrm{h}$, LIT 7 km h OPUS

## F同T険

## l $50 \mathrm{~km} / \mathrm{h}$

This road segment is speed limited at $70 \mathrm{~km} / \mathrm{h}$. In the up-left corner is shown the date of the recording.

The next screenshots are taken after we implemented the project.


Same angle (the white minibus going down the right lane).
In the radar film the minibus driver is speeding up after the curve, from an average speed of $45 \mathrm{~km} / \mathrm{h}$, up to $68 \mathrm{~km} / \mathrm{h}$, and after that he adjusts his speed to $65 \mathrm{~km} / \mathrm{h}$, the same as the driver in front of him, and not taking him over.


Opposite angle.



Opposite angle.


Opposite angle.


Opposite angle (which means the Wolksvagen coming towards the camera).

The recordings show that several drivers have changed their behavior regarding the curve (approaching the curve with smaller speeds - 47 to $53 \mathrm{~km} / \mathrm{h}$ ) and also, down the straight segment of the road they keep an average speed down the limit of $70 \mathrm{~km} / \mathrm{h}$. Also, the taking over is done more responsible, becoming this way less dangerous.

This being said and shown, we would like to add next to the present report an official list of the accidents happened in this area, provided by the police, as they had to register every traffic event, with the most important details (date, time, condition of the road, the cause of the accident, vehicle involved, victims, etc...), list which is "added" because Microsoft Word does not accept the .htm files.

Finally, we hope you enjoyed our presentation, and we remind you that the number of accidents in this area after our project implementation is 0 .

We also wish the best of luck to the other competitors.

