

METRAMOTO

Powered two wheelers traffic measurement for road safety and risks assessment

Project summary:

The safety of powered two wheelers (PTW) plays an important role for the public authorities and the road administrators. Globally speaking, since 2002, even the road safety has eventually increased but still the num of accidents involving the PTW are at high. If we look at the figures: PTW represent only 1% of the total traffic but 28% of the persons killed on the road. This shows that the risk of getting killed on a motorcycle is 24 times more than on a car. Since past few years, there has been a notably significant rise in the number of PTW but it is allowed a lack of data and information on PTW use and the interactions of PTW with the other road users and the road infrastructure. The state of the art conducted in 2009 showed that there is no technical solution as such that can be adapted to measure of the traffic of this specific category of vehicle (unlike the cars and the trucks) and the research development in this domain isn't much active which is an issue of concern.

The project METRAMOTO aims not only to detect and follow the PTW in the traffic to get enough measurers to be used to the relative statistics with the circulation of PTW but also to identify the trajectory of PTW to analyze their interactions with the others vehicles. These objectives deal the mobility, the road management and the road safety. These tools will be developed around several sensors technologies used in the domain of road traffic. The work will be realized by distinguishing the ones who need intrusive intervention on the road infrastructure (hybrid sensor piezo-electric + electromagnetic loop and magnetometers) to the one non-intrusive (image analysis and laser range finder). The companies in partnership for the project will implement the results of this research works and thereof having short-term industrial solutions. With the help of road managers, we will evaluate and compare the results. The output in order to get an overview of the technology developed with respect to the objective to be attained so that one is capable of targeting the proper field of application of each of these technologies.

Principal objectives:

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Principal expected effects:

- From a general point of view, it is expected a thorough knowledge of PTW driver behavior on different types of roads according to traffic flow conditions of traffic. This knowledge is critical to the feasibility of detection of this category of users in the traffic. This knowledge will target areas of application of technologies explored. For different technologies explored in the project, the thesis made significant advances give hope that will decide the possibility of achieving short, medium or long term products for detecting and counting PTW available on the market. Demonstrators are expected for the different technologies.
- The work of recovery PTW traffic data to develop road safety indicators should help to provide tools and methods for using these data and to calculate the risk specific to this category of users.

Progress status (January 2011):

- Startup phase



Duration [36 months
Budget [3 223 k€ (Public Funding: 943 k€)

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Project partners:

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