Status Report of France
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Abstract

This paper provides an overview of the progress and of the research projects of the French Government in the area of road vehicle safety. It present the main topics covered by the French national research program for research and development in land transports, shows the importance of international co-operation in safety research and proposes further issues to improve vehicle safety.

Introduction

This report focuses on road safety activities in France, especially those related to road vehicle safety.

During the last three years, the number of fatally injured road users dropped from 8437 in 1998 to 7582 in 2000, which corresponds to a 10.2% reduction. This is the results of a national program put in place with the a mid-term aim at reducing traffic accident casualties by 50%.

A major step in this program is the set up of the National Council for Road Safety (Conseil National de Sécurité Routière CNSR) during the second quarter of this year. This independent body is aimed at advising the government on the orientations for road safety improvement. More specifically, it will have the three following objectives:

- to evaluate on-going actions
- to propose to the government countermeasures in order to improve road traffic safety
- to sponsor studies in order to improve knowledge in road safety issues.

France is involved in the improvement of road vehicle safety at the national level as well as at the international level. We strongly believe that the improvement of road safety, and even more specifically vehicle safety, has to be based on scientific knowledge gained through applied research activities.

The French Research program in Land Transport

For that purpose, a large innovation research and development program for land transport was launched in 1996. This program called PREDIT was aimed at making industry, research institutes and universities to work together, and is almost completed even if some projects are still running. A large part of the projects are in the area of vehicle safety: 91projects for a total financing support of 97 MF were selected.

It is not possible to list all the projects but it seems important to point out the synergy developed in these project consortia made of teams of different disciplines and competences working together.

Part of these projects were dealing with understanding safety problem through accident collection and analysis. Accident databases are an important tool for the improvement of the knowledge of vehicle safety in real crash conditions. For that purpose, it is important to collect detailed data on

accidents involving recent cars in the three areas which are the infrastructure, the vehicles and the users. The understanding of the interaction between these three items is necessary to analyze the accident as a system defect. With that purpose, France supports a national project on in-depth accidents study involving three teams located in different areas. The detailed knowledge of injuries sustained by accident victims is important in order to define priorities for protection and support the need for accident victims and injuries register, as the one in place since 1995 in the Rhone department. Active safety projects mainly in the area of man vehicle interaction contributed to foresee the possibility to increase safety by crash avoidance. The development of new ITS devices, especially those in the driving aid area, implies that these devices are evaluated in their real use, in order to determine their positive effect on safety, but also their possible negative effect in some specific conditions of use. Some passive safety projects were selected especially in the field of biomechanics, compatibility and advanced restrain systems. In general, recently designed cars have a high level of passive safety; however, taking into account that all accidents cannot be avoided by active safety solutions, it is important to continue to try to optimize passive safety of cars, especially by enlarging the protection to all the population at risk.

The results of PREDIT projects will be presented during a large forum with conferences and an exhibition, which will take place in Paris next week; at the same time the content and the organization of

the next research program in this area will be discussed.

Implication in European Research Projects

France participated in several European research projects of the 4th and 5th framework programs (CREST, HUMOS, ADRIA, SID 2000, STAIRS, COMPATIBILITY, EACS, SIBER, FID, and the Vehicle Passive Safety Network) and as project leader and/or project proposant for some of them. We consider that it is important to join the efforts of teams from different countries through European research projects, especially because, to go further in the knowledge and developments in the safety areas, some of the needed research projects to be done are necessarily big and expensive, and then cannot be carried out at national levels. Moreover, these projects can contribute to future harmonization as scientific results are shared and jointly belong to different countries. France has decided to join EuroNCAP project; this decision is part of a general agreement between the government and the French car industry.

Participation in Preregulatory Activities

In the area of preregulatory research, France contributes to EEVC activities in participating to all working groups as well to the EEVC steering committee, and supports IHRA through EEVC.

Especially, in addition to existing EEVC working groups on adult dummies, side impact protection, car to truck underrun, car to car compatibility, advanced frontal protection, and pedestrian protection, France has promoted a new working group on child protection and is pleased to chair this working group.

It is important that scientists develop new research results to help in the evolution of standards for car safety but in this area, it is also important to be pragmatic in focusing the researches in the areas where there is most potential gains in death and severe injuries, especially those associated with long or permanent disability.

We consider that EEVC and IHRA working groups are the places where are developed scientific knowledge which may be used in future regulation development or to update existing regulations. For that purpose, it is important that the main results obtained by these working groups are transferred rather to WP29 through GRSP, and to the European Commission within the Motor Vehicle Working Group. The signature of the 1998 agreement gives even more importance to international harmonised research activities.

How to go further

It is clearly understandable that future safety improvements will be even more difficult to reach; this implies a better international coordination of research to avoid duplication and to make easier (or faster) to fill the gaps of knowledge; this implies also to develop new approaches for safety improvement; the vehicle safety should be considered a global system approach including pre-crash and crash, interactions between vehicle and infrastructure (road and road equipments) and between users and vehicles. In the pre-crash area, France will start a research program to evaluate the potential benefits of in-board car speed limiters using selected car fleets. In the crash area, it is important not to consider self protection as isolated but in conjunction with compatibility issues; it is also important to assess the protection to all the population at risk and not only to the "average" users. The developments of advanced restraint systems including belt force limiters and multi stage airbags initiated in France are a first answer to that problem.

And finally we consider that it is important to have a good knowledge of the safety provided by new equipments in both active (driving aids) and passive safety, not only from crash tests (EuroNCAP, EC directives) but also in real use (actual accidents). This can only be made through in-depth accident collection and analysis. France sponsors a large in-depth accident data collection and analysis linked with other accident databases, but the question of accident studies needs to be raised at the European level.

The French contribution to this conference through the exhibitions and the scientific presentations is a confirmation of the high involvement of French teams in vehicle safety research and development.