

Partner Search Form

1. Project Proposal Information

Project Proposal Title	DEVELOPMENT OF METHODOLOGY OF VEHICLE ASSESSMENT ACCORDING TO THEIR CONDITION
Project Proposal Acronym	DeVeCo
Keywords	vehicle safety, road safety
Abstract (Max. 2000 words)	<p>Unlike other technical systems, a condition change of a vehicle does not depend only on its system construction, the way its components are manufactured, materials applied or on its assembly mode and use, but also on the way it is operated by its driver, including its maintenance, possible wreck, traffic accidents, etc.</p> <p>Nowadays there is a lack of identification, qualification and quantification of the influence of the vehicle condition on safety in respect to the vehicle age and its exploitation condition, including other factors as well.</p> <p>The positive vehicle assessment of safety for any new vehicle is sufficient for such vehicle to start its exploitation. Yet this issue remains under-explored in respect to how a vehicle changes its safety characteristics over time and in regard to different possible sources of changes of its condition.</p> <p>The problem of vehicle condition regarding safety is specifically expressed in traffic accidents when there is a need formally and essentially to be appointed their arouser. Although the world statistics show that a huge percent of these cases (over 95%) are caused by driver's mistakes i.e. human factor, the fact still remains that the condition of a vehicle that participated in the accident as it "motive" is an important guidance that has not been researched enough.</p> <p>The goal is to study and find out relevant factors which influence the vehicle condition changes and by that its safety in view of changing vehicle performances. The main goal is to find out possibilities of a new method i.e. a mode of evaluation of vehicle condition by which a criterion of vehicle assessment is created in the moment of observance.</p> <p>This new method, i.e. a new mode of evaluation of vehicle condition and assessment of its influence on safety of the vehicle observed must take into consideration the fact that vehicles in exploitation basically differ among themselves according to many factors, such</p>

Partner Search Form

	<p>are their class and purpose, size, origin, i.e. model and type, manufacturing year etc. and especially the history of occurrences of a vehicle observed during its usage. It is intended to be given a comparison of how the safety characteristics are changing according to different classes of vehicles.</p>
<p>Project Description (Main Work Packages)</p>	<p>The basis of performing planned activities in the given solution is in the application of analytical methodology, based on application of methods of system engineering, including mathematical statistics, probability theory and identification theory. It is consisted of:</p> <p>DeVeCo 1:</p> <ul style="list-style-type: none"> - Review and presentation of methods for safety assessment of a new vehicle; - Review and presentation of methods for assessment of the condition of a vehicle in exploitation, such as regular and extraordinary technical inspections, vehicle examination within the control of accomplishing the maintenance, especially after elimination of consequences of traffic accidents experienced by such vehicle; <p>DeVeCo 2:</p> <ul style="list-style-type: none"> - Research of parameters that led to attenuation of overall vehicle safety; - Contemplation of the change of vehicle condition; - Identification, qualification and quantification of factors that have influence on vehicle condition change during the time of its usage; - Enforcement of system analysis of factors that influence the change of vehicle condition; <p>DeVeCo 3:</p> <ul style="list-style-type: none"> - Development of evaluation methods (grade) of vehicle safety according to its condition; - Use of heuristic algorithms for combinatorial optimization for finding an optimal combination of weight factors for the various criteria in influencing the formulation of the vehicle safety grade. - Use of data mining algorithms (ID3, C4.5, CN2, CART) for statistical analysis of vehicle data and knowledge extraction to be used in building a model for vehicle safety evaluation. <p>DeVeCo 4:</p> <ul style="list-style-type: none"> - Comparative analysis of the results generated by computer simulations with the aforementioned algorithms as opposed to the real behavior of vehicles taken in consideration in the research. - Comparative analysis and assessment of relevant factors for safety obtained by the research against those applied for obtaining positive

Partner Search Form

	grade of a new vehicle safety - Conclusions DeVeCo 5: Management
Current Consortium (Partners, Organisation Types)	Ss. Cyril and Methodius University - Faculty of Mechanical Engineering - Skopje University of Belgrade - Faculty of Mechanical Engineering
Deadline for Responses	1 July 2011

2. Profile of the Partners Sought

Organisation Type	Academy, automotive industry, research organization in the field of Vehicle Assessment
Required Skills and Expertise	Exchange of experience, transferring state of the art, know-how and best practices in the respected field
Role in the project	coordinator/partner
Other Requirements	/

3. Project Proposer Information

Name of the Organisation	Ss.Cyril and Methodius University - Faculty of Mechanical Engineering - Skopje
Organisation Type	University
Country	Republic of Macedonia
Fields of Activity	vehicle safety, road safety
Contact Person	Kristina Jakimovska
Position in the Organisation	Teaching and Research Assistant
Tel	+389 2 3099 267
Email	kristina@mf.edu.mk



Univerza v Mariboru

Fakulteta za gradbeništvo



Partner Search Form

URL	http://www.mf.edu.mk
Previous FP Projects Participated	FP7-CSA project: TransBonus

Please send filled in form by 25. 3. 2011 to: fg.tec@uni-mb.si

