

Marking Light Wins in the Land of Ideas

Open Day of the Institute of Measurement and Control of Karlsruhe Institute of Technology (KIT)
on the Occasion of the Bestowal of the Prize on March 31



Shedding light into darkness: Driver assistance system light marks persons and deer and, thus, helps prevent accidents. (Photo: Marko H. Hörter, KIT)

The “Marking Light” project is winner of the competition “365 Places in the Land of Ideas”: The driver assistance system developed by the Institute of Measurement and Control (MRT) of Karlsruhe Institute of Technology (KIT) light-marks persons and animals at the roadside, thus, making them visible much earlier. On the occasion of the prize ceremony on March 31, the MRT will present itself to the interested public on an Open Day from 14 to 17 hrs. Representatives of the media are cordially invited. Kindly register using the form enclosed.

Deer crossing the roads or bikers and pedestrians at the roadside – driving a car is associated with many dangers in particular at night. “To prevent accidents, a quick response time of the driver and early detection of persons or deer at the roadside are of decisive importance in particular on dark roads,” says Marko H. Hörter from the Institute of Measurement and Control (MRT). For this purpose, the scientist developed a technology going one step further than conventional infrared cameras: A complex mechatronic system analyzes the images in a fully automatic manner and, if necessary, light-



*KIT Mobility Systems Center:
Solutions for tomorrow's mobility*

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marks potential dangers by a very precise spot from extra-bright LED lamps. The driver's attention is caught without the driver having to withdraw his eyes from the road.

The infrared camera integrated in the engine hood of the test car supplies images that are then analyzed individually by the computer within less than 40 ms. The system is capable of distinguishing persons and animals from other objects. In addition, the computer can determine their real 3D position, speed, and direction from 2D images and calculate the risk of collision in this way. A signal is transmitted to the light system in case of imminent danger only. There, a movable device positions the spot precisely and in a glare-free manner, such that the potential danger is marked by a blinking, blue-white spot.

The system successfully passed a test of two weeks' duration with 33 test persons on a country road in Bad Bergzabern: Light-marking was found to increase the perceptibility of danger by 35 to 40 meters on the average and to give drivers 2 to 3 seconds more to react.

On the occasion of the bestowal of the prize "Selected Place 2012" on Saturday, March 31, the KIT scientists will present the "Marking Light" project to the interested public. The prize ceremony will take place at 14.00 hrs at the Institute of Measurement and Control (MRT), building 40.32 (Engler-Bunte-Ring 21), on KIT Campus South. Professor Jürgen Fleischer, Dean of the Department of Mechanical Engineering, will welcome the guests. Welcome addresses will be given by Professor Christoph Stiller, Head of MRT, and Christine Montigel from the "Germany – Land of Ideas" initiative. Marko H. Hörter will then present the "Marking Light" project briefly. The laudation will be made by Andreas Rohde from Deutsche Bank, the cooperation partner of the "Germany – Land of Ideas" initiative. Subsequently, visitors will be given the opportunity to join vehicle demonstrations and listen to explanations of the vehicle pool in the machine hall.

The Germany-wide competition "365 Places in the Land of Ideas" visualizes the potentials of Germany as a location of innovation. Together with Deutsche Bank, the "Germany – Land of Ideas" initiative annually selects 365 projects that sustainably contribute to the viability of Germany.

Invitation to the prize ceremony with a description of how to reach the institute:

http://www.mrt.kit.edu/markierendeslicht/downloads/Flyer_Tag_der_offenen_Tuer_KIT_MRT_2012-03-31_AS003_final_release.pdf

Film on the “Marking Light” project:

http://www.mrt.kit.edu/markierendeslicht/video_gallery.html

The Mobility Systems Center pools KIT activities relating to vehicle technology. Presently, 40 KIT institutes with about 800 employees are working on methodological and technical fundamentals for tomorrow’s vehicles. It is their objective to develop concepts, technologies, methods, and processes for future mobility considering the complex interactions of vehicle, driver, traffic, infrastructure, and society.

Karlsruhe Institute of Technology (KIT) is a public corporation according to the legislation of the state of Baden-Württemberg. It fulfills the mission of a university and the mission of a national research center of the Helmholtz Association. KIT focuses on a knowledge triangle that links the tasks of research, teaching, and innovation.

This press release is available on the internet at www.kit.edu.

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