Abstract

The aim of the iCS system is to detect and record footages of possibly hazardous situations on a pedestrian crossing and/or conduct real-time traffic surveillance. Videos recorded by cameras could be used for enforcement purposes or as evidence in case of an accident. Information about the traffic could be used for statistic purposes and thus help to improve road infrastructure planning and traffic flow.

The system contains two Smart Cameras. The first one detects pedestrians which are on or close to the pedestrian crossing, the second one detects and tracks vehicles approaching the crossing, additionally the vehicle's numberplate is detected and recognized. Based on vehicle's position, direction and velocity and pedestrian's position the system decides if the situation is hazardous or not. If so both cameras start to record beginning with several seconds before the decision (using an image ring buffer).

1. Company information

SLR Engineering is a high-tech startup which was formed in 2008 by Dipl.-Ing. Oliver Sidla. The goal of SLR Engineering is the development of software systems for computer vision which can be used for object recognition, detection and surveillance. SLR Engineering undertakes system development for machine vision, and research and development in computer vision with a focus on real-time, real-world capable algorithms.

Its founders have many years of experience in the implementation of industrial inspection systems. The image analysis algorithms from SLR Engineering are based on advanced machine learning methods which can train and adapt themselves to new object classes.