



3D VISION AND MODELING

ADVANCED DRIVER ASSISTANCE FOR TRAMS

BOMBARDIER "ODAS" OBSTACLE DETECTION ASSISTANCE SYSTEM

The recent growth of cities, the appearance of urban agglomerations and the ever-growing longing of humanity for unrestricted mobility brings about an increased traffic volume in extremely confined spaces. Inevitably, this evolution leads to an increased number of traffic accidents and collisions with light rail vehicles, finally causing important damage, injury and high costs.

INNOVATION PARTNERSHIP

In partnership with Bombardier Transportation, the world market leader for rail vehicles, and Mission Embedded (Member of Frequentis Group), AIT developed a driver assistance system geared to minimising the danger of collision for rail vehicles.

The collaboration with industry builds on several years of AIT research on efficient algorithms for the evaluation of stereo imagery. The result is 3D sensors with very high spatial resolution that make it possible to accurately monitor the route ahead of the rail vehicle. The system can automatically identify objects as obstacles and locate them accurately. The 3D stereo vision technology used is robust, has a long range and a high spatial resolution.

The system automatically detects potential collisions with road users, assists the driver by suitable reactions and, therefore, reduces the risk of collisions and their consequences.

COLLISION WARNING AND BRAKE ASSISTANT

The "ODAS" called Obstacle Detection Assistance System is available as collision warning and brake assistant for new built as well as retrofit system for existing vehicles. It aims increasing the active safety of passengers, drivers, pedestrians and cyclists and thus reducing subsequently costs at collisions.

ODAS is already in commercial service at operator VGF, Frankfurt/Main (Germany) and was ordered for the complete Bombardier FLEXITY Classic fleet. Currently, several ODAS-offers are in preparation for European operators.

