

Traffic Sign Recognition for Driver Assistance Systems

Dr. Alexander Behrens, Continental AG

Traffic sign recognition is based on machine learning and pattern recognition, which rely on classifier trainings with intensive data usage. For this purpose, Continental developed a MATLAB® based tool chain to label ground-truth data, inspect recorded scenes, and develop and validate learning algorithms.

MATLAB is used daily for developing and evaluating driver assistance functions. Continental engineers design prototypes with MATLAB for predevelopment and proof of concept. Data management, evaluation, and interactive analysis are supported by MATLAB tools and interfaces. Traffic sign recognition and other functions make high use of MATLAB tools.

Advantages of using MATLAB:

- Quickly and reliably perform predevelopment of driver assistance function
- Evaluate and generate key performance indicators
- Develop tools with user-friendly interfaces

MATLAB reduces our tool development efforts, accelerates our simulations, and allows **reliable, repeatable, and accurate** parameter optimizations.

