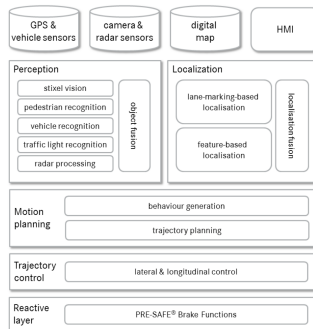


Making Bertha Drive - An Autonomous Journey on a Historic Route

J. Ziegler, T. Dang, U. Franke, H. Lategahn, P. Bender, M. Schreiber, T. Strauss, N. Appenrodt, C. G. Keller, E. Kaus, C. Stiller, R. G. Hertwich, et al. (ITSM 2014)



- ▶ Gives an overview of the autonomous vehicle which completed the route from Mannheim to Pforzheim, Germany, in fully autonomous manner
- ▶ The autonomous vehicle was equipped with close-to-production sensor hardware in terms of cost and technical maturity than in many autonomous robots presented earlier
- ▶ The key features of the system are:
 - ▶ Radar and stereo vision sensing for object detection and free-space analysis
 - ▶ Monocular vision for traffic light detection and object classification
 - ▶ Digital road maps complemented with vision-based map-relative localization
 - ▶ Versatile trajectory planning and reliable vehicle control