

Comparison of Different Tracking Approaches on Pre-Fused Data for Automotive Perception System

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Abstract—The development of autonomous vehicles requires different sensor types for constructing an accurate local environment model. The evolution of sensor technology is challenging the development of sensor data fusion. Although, the sensors are getting more robust and reliable. However, because of the development of sensors the data fusion should be able to handle diversified sensor clusters. Thus, the high-level sensor fusion algorithms, like track to track method, are getting more important. This paper introduces different tracking approaches, which are intended to support a track-to-track fusion method of an autonomous vehicle in highway situations.

Keywords—Autonomous vehicles, Automotive perception, Sensor Fusion, Track-to-track fusion, Tracking algorithm, Data association, JIPDA