

ABSTRACT

FEATURE-LEVEL FUSION METHOD AND SYSTEM FOR COOPERATIVE PERCEPTION BASED ON VEHICLE-INFRASTRUCTURE COOPERATION

Disclosed are a feature-level fusion method and system for cooperative perception based on vehicle-infrastructure cooperation, which relate to the technical field of cooperative perception for automatic driving of vehicles. The method includes: acquiring vehicle-end point cloud information and a timestamp corresponding to the vehicle-end point cloud information; performing feature extraction on the vehicle-end point cloud information to generate a vehicle-end point cloud pseudo-image, and performing high-dimensional feature extraction on the vehicle-end point cloud pseudo-image to generate vehicle-end point cloud feature space distribution; acquiring roadside-end point cloud feature data, the roadside-end point cloud feature data being determined according to roadside-end point cloud information stored according to the timestamp; decompressing the roadside-end point cloud feature data, and mapping the decompressed roadside-end point cloud feature data to the vehicle-end point cloud feature space distribution by using feature space correction; and fusing the roadside-end point cloud feature data mapped to the vehicle-end point cloud feature space distribution with the vehicle-end point cloud feature space distribution, and processing the fused feature information, thereby realizing vehicle-road cooperative perception.