

ABSTRACT

An obstacle detection device according to an embodiment includes an acquiring unit, a rail detector, a monitoring region setting unit, an obstacle detector, and an output unit. The acquiring unit acquires a visible light image obtained by imaging in a traveling direction of a railway vehicle by an imaging unit included in the railway vehicle and a distance image that allows a distance to an object existing in an imaging range of the imaging unit to be identifiable. The rail detector detects, from the visible light image, a rail on which the railway vehicle travels. The monitoring region setting unit uses the rail as a standard to set, in the visible light image, a three-dimensional monitoring region defined by a loading gauge of the railway vehicle or a construction gauge. The object detector detects an obstacle that exists in the monitoring region and hinders the traveling of the railway vehicle, based on range information that allows a distance range to the monitoring region that is based on the visible light image to be identifiable and the distance image. The output unit outputs a result of detecting the obstacle.