ABSTRACT

LONG RANGE STEERABLE LIDAR SYSTEM

Systems and methods are described that relate to a light detection and ranging (LIDAR) device. The LIDAR device includes a fiber laser configured to emit light within a wavelength range, a scanning portion configured to direct the emitted light in a reciprocating manner about a first axis, and a plurality of detectors configured to sense light within the wavelength range. The device additionally includes a controller configured to receive target information, which may be indicative of an object, a position, a location, or an angle range. In response to receiving the target information, the controller may cause the rotational mount to rotate so as to adjust a pointing direction of the LIDAR. The controller is further configured to cause the LIDAR to scan a field-of-view (FOV) of the environment. The controller may determine a three-dimensional (3D) representation of the environment based on data from scanning the FOV.

Figure 2