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(54) Title: LIGHT DETECTION AND RANGING (LIDAR) SENSOR SYSTEM INCLUDING TRANSCEIVER DEVICE

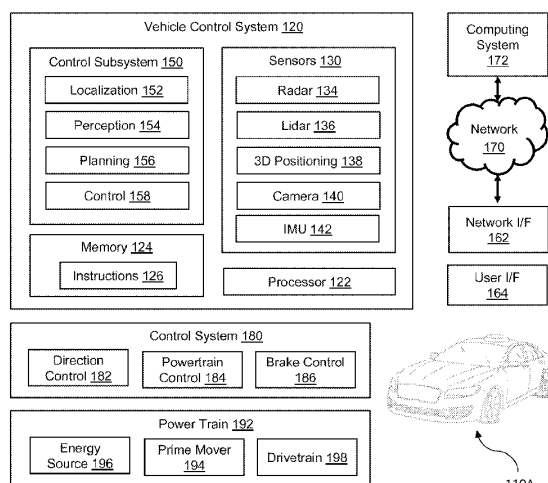


Fig. 1A

(57) Abstract: A light detection and ranging (lidar) system for a vehicle may include a plurality of transceivers, a device including a laser source configured to generate a beam, and one or more optical components, and a processor. The processor may be configured to operate the device to generate, based on the beam, a plurality of optical signals associated with a plurality of local oscillator (LO) signals, and multiplex the plurality of transceivers to transmit the plurality of optical signals to an environment. In response to transmitting the plurality of optical signals, the plurality of transceivers may be configured to receive a plurality of returned optical signals that are reflected from an object in the environment, and pair the plurality of returned optical signals with the plurality of LO signals.

[Continued on next page]

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