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(54) Title: SYSTEM AND METHOD OF OPERATION FOR REMOTELY OPERATED VEHICLES FOR SIMULTANEOUS LOCALIZATION AND MAPPING

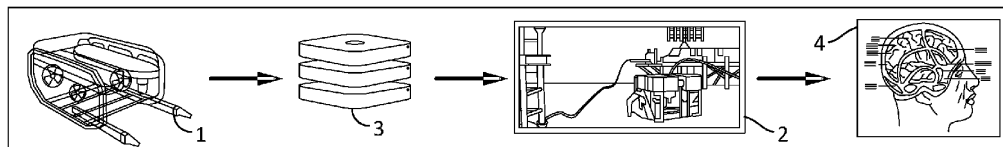


FIG. 1A

(57) Abstract: The present invention provides systems and methods for simultaneous localization and mapping from video with adversarial shape prior learning in real-time. For example, an unsupervised direct and dense SLAM may learn a geometry prior from data. Given a video sequence, a depth map of a target frame, as well as the target frame and the camera motions between the target frame and all the remaining frames may be output. Further, by fusing a camera motion estimate with a positional sensor's output, positional drift and the need for loop closure can be avoided.

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