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(54) Title: CLUTTER TIDYING ROBOT UTILIZING FLOOR SEGMENTATION FOR MAPPING AND NAVIGATION SYSTEM

(57) Abstract: A method and apparatus are disclosed for a clutter tidying robot utilizing floor segmentation for its mapping and navigation system, whereby a perception module and navigation module transform lidar and image data from lidar sensors and cameras of a robot sensing system using segmentation and pseudo-laserscan or point cloud transformations to generate global and local maps. The robot pose and maps are transmitted to a robot brain that directs an action module to produce robot action commands controlling the operation of a clutter tidying robot using the pose and map data. In this manner multi-stage planning and sophisticated obstacle avoidance techniques may be incorporated into autonomous robot operations.

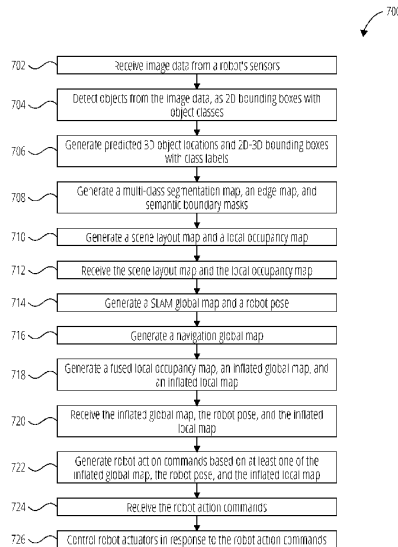


FIG. 7

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