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(54) Title: ROBOT OBSTACLE COLLISION PREDICTION AND AVOIDANCE

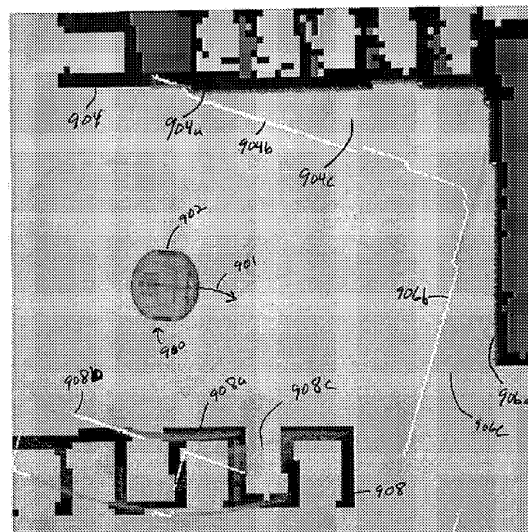


Figure 17

(57) Abstract: A method for predicting a collision between a mobile robot and an obstacle in an environment includes obtaining laser scan data for the mobile robot at a current location in the environment. The method also includes predicting a future location of the mobile robot in the environment and producing predicted laser scan data corresponding to the future location of the mobile robot in the environment. The method further includes assessing the predicted laser scan data relative to the mobile robot at the current location to determine whether a collision with an obstacle is predicted.

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