In this work, a solution for global localization of small robot in ambiguous environment is proposed using "Multiple Hypothesis Tracking" approach. The ROS navigation package is extended to work with multiple possible locations of the robot over a known map. This extension manages position theories spread over the working area of the robot, and global plans navigating robot to goal from these positions. It provides them to MHT plugins that can adjust creation of global plan for robot movement based on those theories and corresponding plans. To further help with robot localization, the solution contains a modification of AMCL node from the ROS navigation package to accommodate fusion of different sensor types.