

Laser Based Pose Tracking

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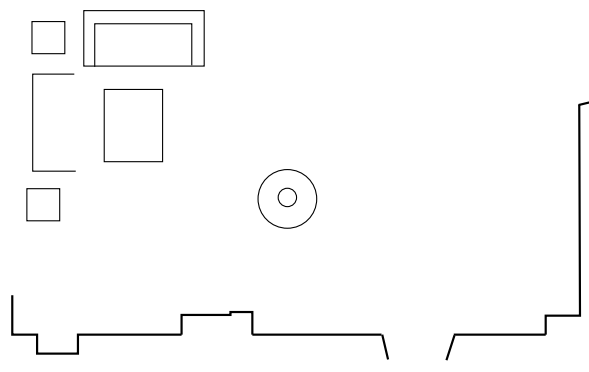
Abstract

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The experiments involve evaluation in multiple rooms, to demonstrate operation in varying settings. The experiments also involve pose tracking while passing between rooms. Finally the results are summarized and avenues for future research are outlined.

out at a set of discrete instances, for example upon entering a room. Given the large uncertainty that is associated with localization, i.e. the position estimate might be off by meters, the process is often slow. This is, however, often of secondary importance as the process only is carried out at discrete instances. Given availability of frequent (and reliable)

where $\hat{x}_{k+1jk;0} = \hat{x}_{k+1jk}$, $\hat{x}_{k+1jk;N} = \hat{x}_{k+1jk+1}$, $K_{i;k}$
is the Kalman gain and C is either $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \end{bmatrix}$



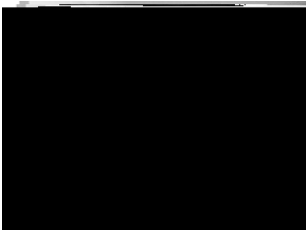


Figure 7: Open space

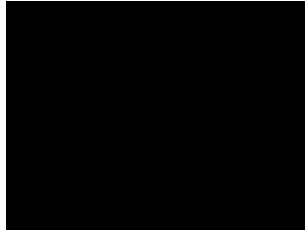


Figure 8: Corridor

Corridor is modeled as a rectangle, the only two possible sources of information about the position along the corridor comes from the two short walls. When moving far away (> 15 m) from the short walls they

