Abstract

Semantic maps have come up to facilitate high-level human robot interaction like "deliver a laptop for maintenance". Textual signs posted on the walls and room doors in indoor environments are environment features that could be easily identified by service robots. These signs provide some semantic information like the function of the room and its occupants. In addition, they consider landmarks for the service robots. This paper is a continuous work of developing a framework for creating a semantic map for indoor environment using mobile robot [17]. The paper addresses the problem of automatically detecting and recognizing textual signs during robotic mapping. Then, annotating these recognized signs to a previously generated robotic grid map. ATRV-mini robot has been used in our experiments.
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Index Terms

Computer Science
Pattern Recognition

Keywords

Mobile Robot  Map Learning  NNet  ATRV-mini  Semantic Map  OCR