A Software System for Autonomous Rescue Robots

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Abstract: Rescue robots are prime examples of cyber-physical systems which are characterized by a tight combination of the system’s computational and physical elements. In this paper we analyze the requirements of such a system and propose a generic formulation that can be used to design software frameworks for this field. We present the rescue robot system GETbot organized and configured according to the design proposed. Finally, testing in order to validate the efficiency and robustness of individual modules as well as their interconnection is addressed.