Abstract

Water is life. There is no denying. But water is also a source of many disasters and dangers. There are a lot of rivers, canals and waterways in South Asian countries. In some cases water transports are the only mode of transportation for movement and trade. Many natural and man-made causes like flood, cyclone, tsunami, jacking, looting; sometimes, people get stuck in a water surrounded environment. So it an unavoidable issue to rescue the people when they fall in such situation. Two kinds of automated rescue mission can be possible in those cases, one is air-borne and another one is water-borne. Water vehicles shows better efficacy instead of air vehicle for developing countries in terms of economy and complexities. Therefore here in this paper, a basic principle and methods towards an automated water-borne rescue system is outlined. The architectures of distributed system along with multi-logics are presented. The proposed system is actually comprised of Artificial Intelligence (AI) and Mobile Robotics. The proposed system is then investigated by all available path finding algorithms, to find a most suitable which can conduct rescue operation for different map systems with better efficiency and better economy.
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Index Terms

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Keywords

Robotic Rescue System  Path Planning Algorithms  Graph-search Algorithm  Breadth-first Algorithm  A*  (astar) Algorithm; Dijsktra Algorithm