

Agent Based Dynamic Geographical Map Navigation System Using A* Algorithm



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Declaration

I declare that this dissertation does not incorporate, without acknowledgment, any material previously submitted for a Degree or a Diploma in any University and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text. I also hereby give consent for my dissertation, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and summary to be made available to outside organizations.

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Dedication

This thesis is dedicated to my parents, who supported me all the time of my life and navigate me to do higher studies. It is also dedicated to my sister who helps me a lot in my studies.

Further this thesis is dedicated to all those who believe in the richness of learning and people who curious about new things.



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Abstract

Navigation is becoming rapidly popular in the society with technological enhancement of the world. In many mobile phones, tab pcs, vehicles and so many devices include navigation systems as a default feature. Further, gaming industry and mobile robot industry vastly use navigation technology for various kinds of operations. Due to this popularity, GIS based Navigation systems have become highly influential for day to day life of the society.

Though navigation systems are much popular, many GIS based navigation systems have several issues. One of the major issues is, once it calculates and plans path it monitors the selected path only. Because of this reason some paths have become more efficient than calculated path due to traffic situation changes while navigating on the selected route. User misses such kind of paths due to the above issue.



Thus the research focus on how to solve above mentioned problem using A* searching algorithm and Agent technology. First it discusses in the literature review chapter, different researches conducted related to GIS and robot navigation will be discussed. In the design chapter, gives high level picture about the design. Then gradually it will explain how agents solve this issue by communicating with each other, under implementation chapter. Evaluation chapter discusses how implemented solution has been tested and the other advantages which can be gained by overcoming limitations of the existing release management tools. Under conclusion chapter it discusses whether each objective has achieved by providing appropriate test samples. Achievements of the objectives and problems of the followed process will be discussed in the conclusion chapter by providing appropriate test examples.

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