7 Conclusion

The traditional artificial potential field method uses the combined force to solve the obstacle avoidance problem of the object. There are mainly trap areas and local minimum problems. Therefore, the unique phenomenon in the flow field theory is used to change the complex potential function through eddy current and conformal transformation to replace the role of the repulsive force field, while improving the object's ability to perceive moving obstacles. Instead of the role of the gravitational field, the existence of the virtual target point avoids U and C-type traps, reduces unnecessary obstacle repulsion, and plans a smooth path faster. The introduction of the correction function eliminates the chasing domain of moving obstacles to a certain extent, and brings into the complex potential function the optimized velocity vector.

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