Research on Variable Thrust Directional Control Technique for Plateau Unmanned Aerial Vehicles

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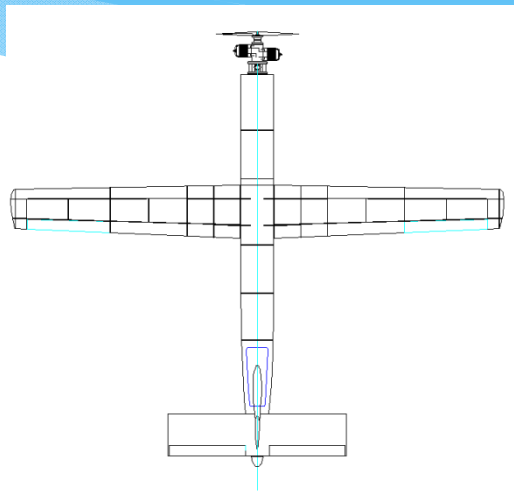
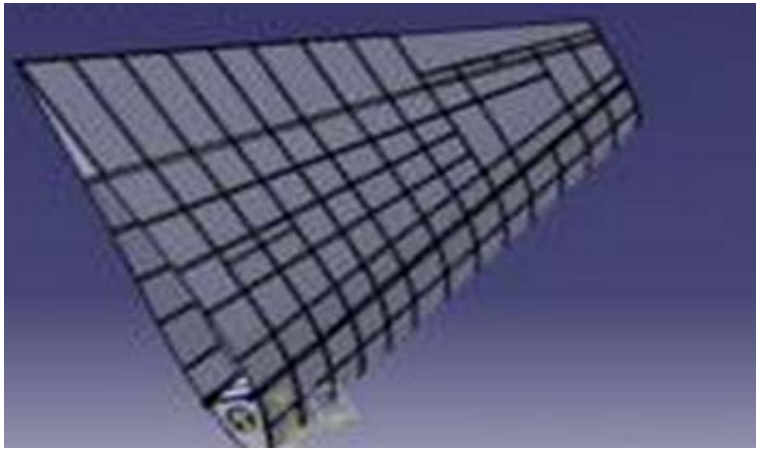
Introduction



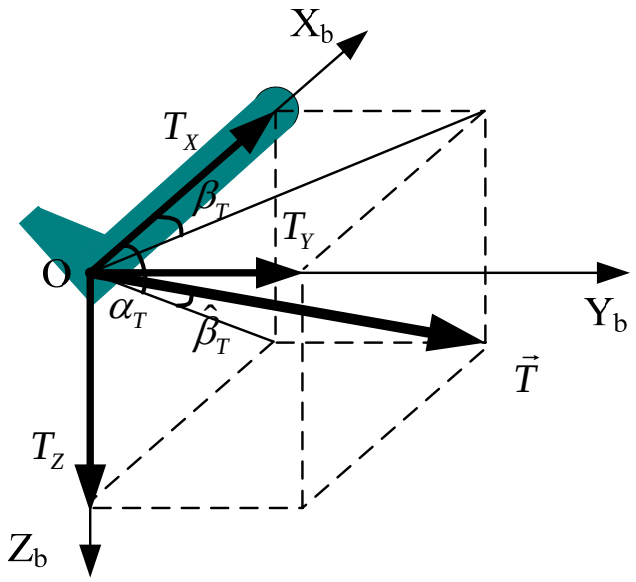


High span chord ratio wings

- More lift at low airspeed
- Weak maneuverability

Introduction

Thrust vectoring technique



Method

The proposed variable thrust mechanism

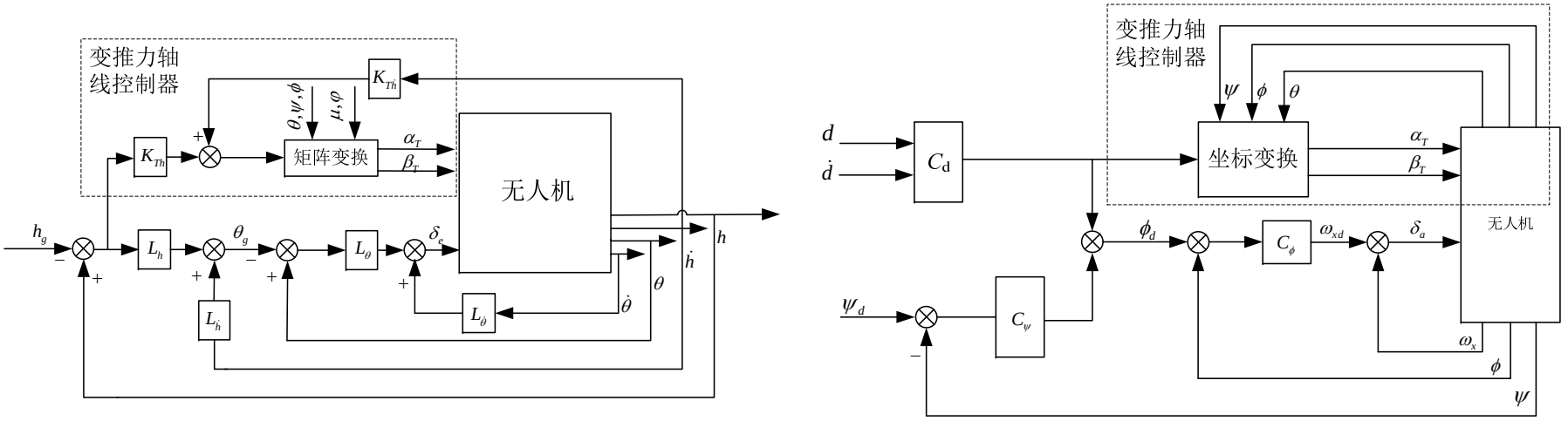
- Normal propeller engine
- 2 DoF servo platform

Method

The proposed variable thrust mechanism

Method

The combinational flight control system



Implementation

Flight test in plateau region

Conclusion

- A novel variable thrust directional mechanism for propeller UAV
- Increased maneuverability
- Enhanced path tracking capability