

# GPS

\* 1, 2, 3, 4

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## Abstract: GPS

GPS GPS  
GPS GPS 가 가  
GPS DGPS  
rate gyros  
가 DGPS  
GPS 가 General Aviation  
가

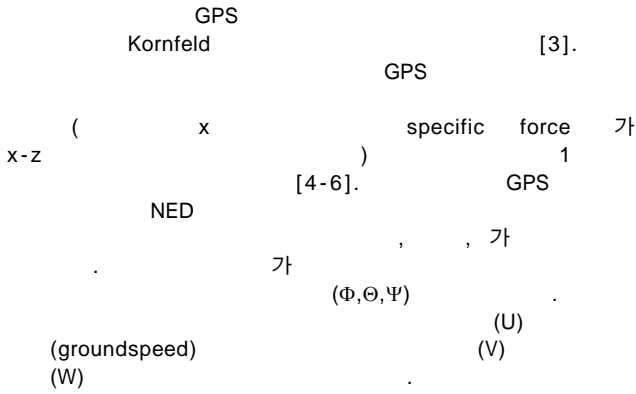
## Keywords:

GPS, DGPS  
CDGPS [7]  
1. 가 GPS DGPS  
가 [1]. GPS DGPS  
가 (autonomy) 가 GPS GALILEO  
가 GLONASS 가  
GPS 가 2 3 4 5  
[2]. GPS [3].  
[4-6]. 가 가 2.  
rate gyros [6] [8]  
가 rate gyros 2.1  
DGPS  
[7] Montgomery GPS [10].  
CDGPS 가

가  
가  
( )

[6] [8]

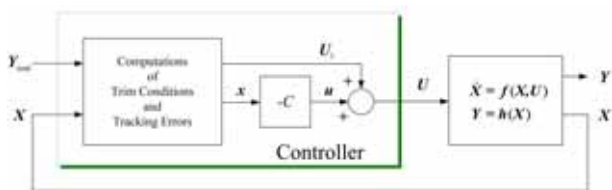
2.2



1. GPS

가  
GPS (robustness)  
rate gyros  
GPS (responsiveness)

2.3



2.

2 (Ycmd) 가 (U) coordinated flight 가  
가  
coordinated flight

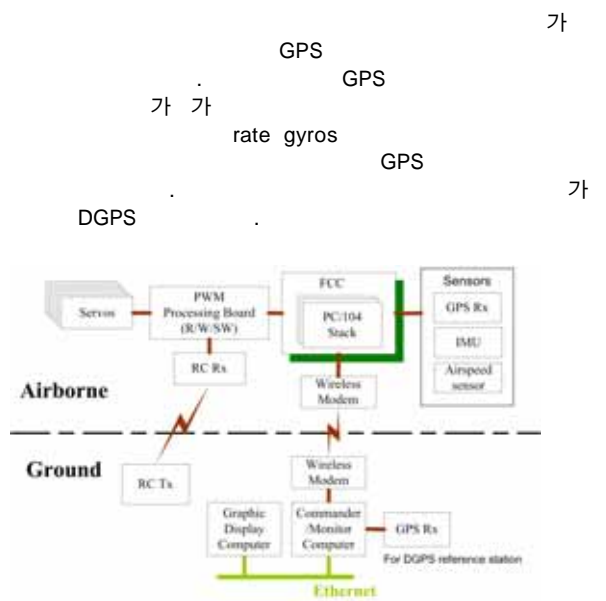
coordinated flight  
Quadratic Requator) LQR(Linear [11].

가

[9, 3].

가  
glide-slope , flare  
[6] [8] (airspeed sensor)  
GPS

3.



3

DGPS GPS  
PC/104, PWM  
IMU, airspeed sensor  
rate gyros  
NovAtel  
3151R 10Hz  
rate gyros 20Hz  
airspeed sensor 20Hz  
DGPS 1m  
가 DGPS 가  
flare 가

가 2.5m  
4  
13kg  
5  
avionics box



4.



5. Avionics box

Visual C++ . Windows MS Windows 2000 or XP OS

4.

3m/s) GPS 가 (가 , GPS 가 가

steering angle steering 가 가 가

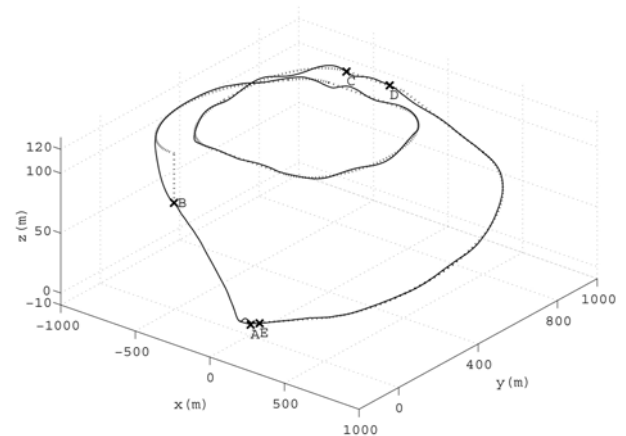
가 가 가 ) 1 glide-slope 가 glide-slope 가

glide-slope vertical cross track error  
flare  
airspeed sensor [8]. 가  
가 airspeed sensor

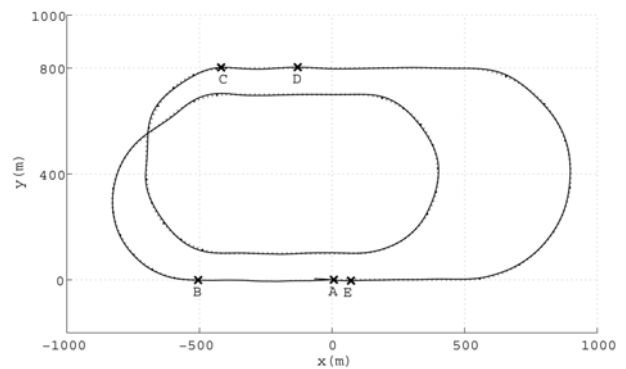
bias 가 glide-slope  
6~9 6 3 7  
8

가 A B  
6~8 6~8  
가 B 가  
6 8 C  
가 D glide-slope E

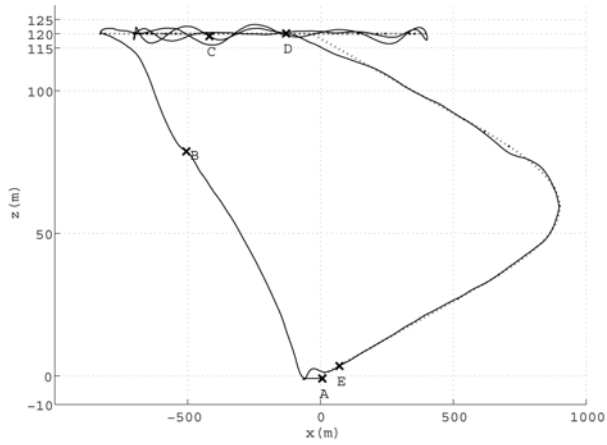
flare 가 가



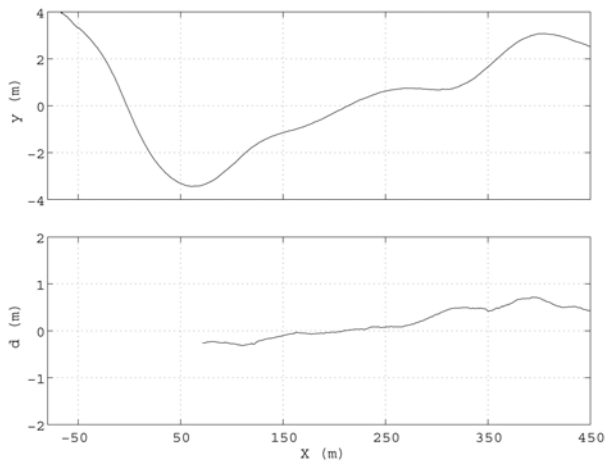
6. : 3



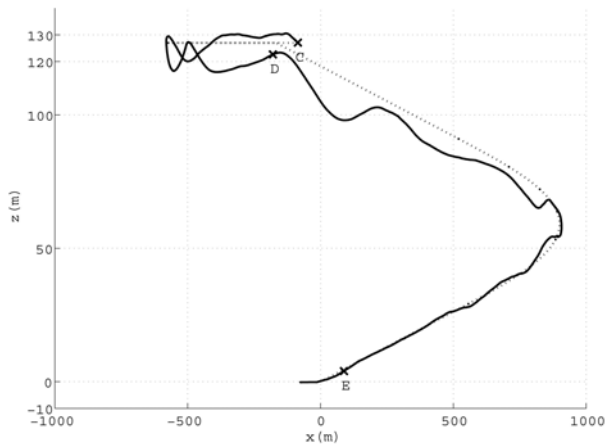
7. :



8.



9.



10.

9 glide-slope  
(y and d) 1m  
4m  
가 가  
6~9 flare 가  
10 airspeed sensor  
3~6m/s 가 0  
flare flare  
가

flare 1m  
DGPS ,  
flare 가 가  
가  
IMU 가  
flare pitch  
flare  
6.  
GPS  
air speed sensor, rate gyros,  
가  
(curved landing approach) 가  
GPS INS 가  
GPS  
GPS (primary)

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