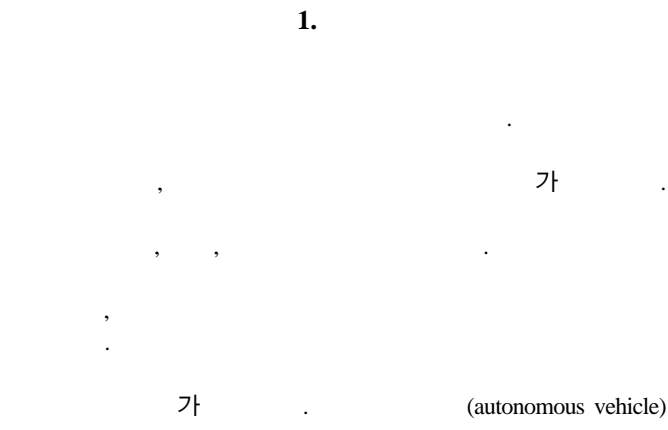


# Ultrasonic-based Obstacle Detection for Autonomous Control of Active Unmanned Forklift

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Key words : Active Unmanned Forklift, Controller Area Network, Distributed Control Network, Obstacle Detection



AGV(Automatic Guided Vehicle)  
Fig.1

Recognition),  
Planning),  
Avoidance),  
(Location Recognition)

(Environment  
(Path  
(Collision

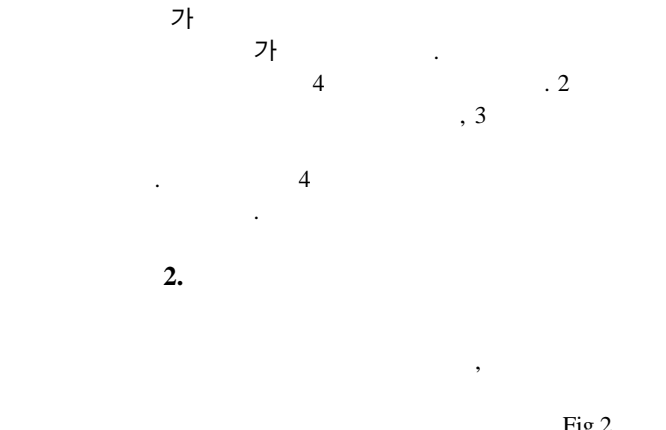


Fig.2  
(Autonomous control Part),  
(Localization and path planning part),  
(Pallet engagement and obstacle detection part)

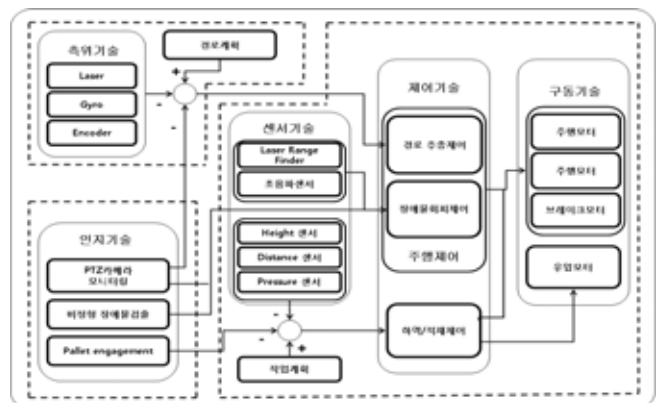


Fig. 2 System architecture of Active Unmanned Forklift  
575

3.

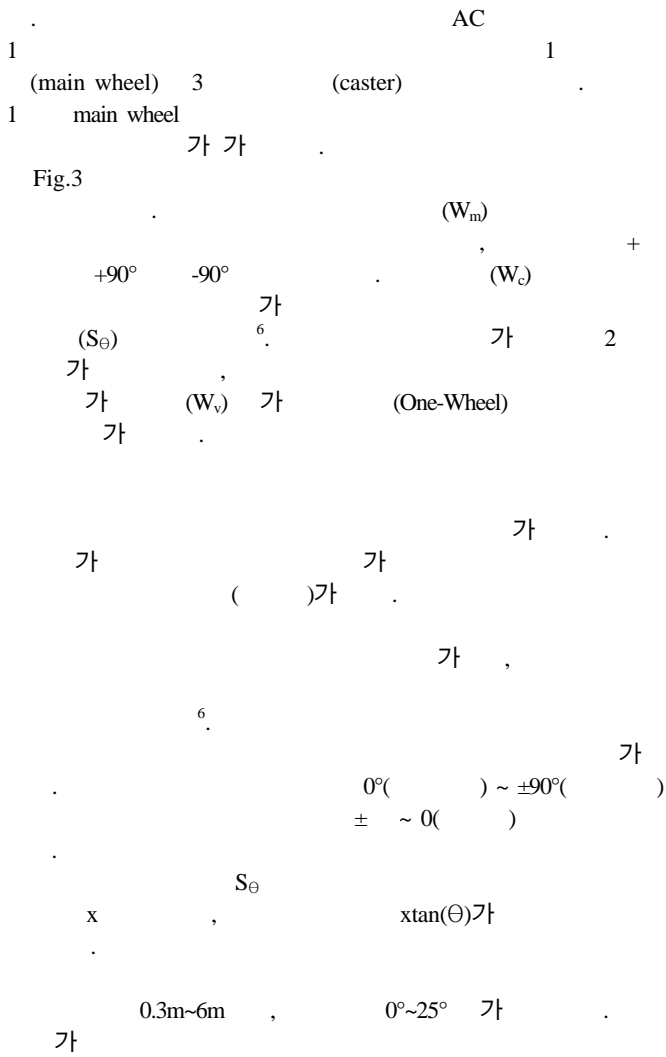


Fig. 3 Kinematic analysis of Forklift truck

Fig.4

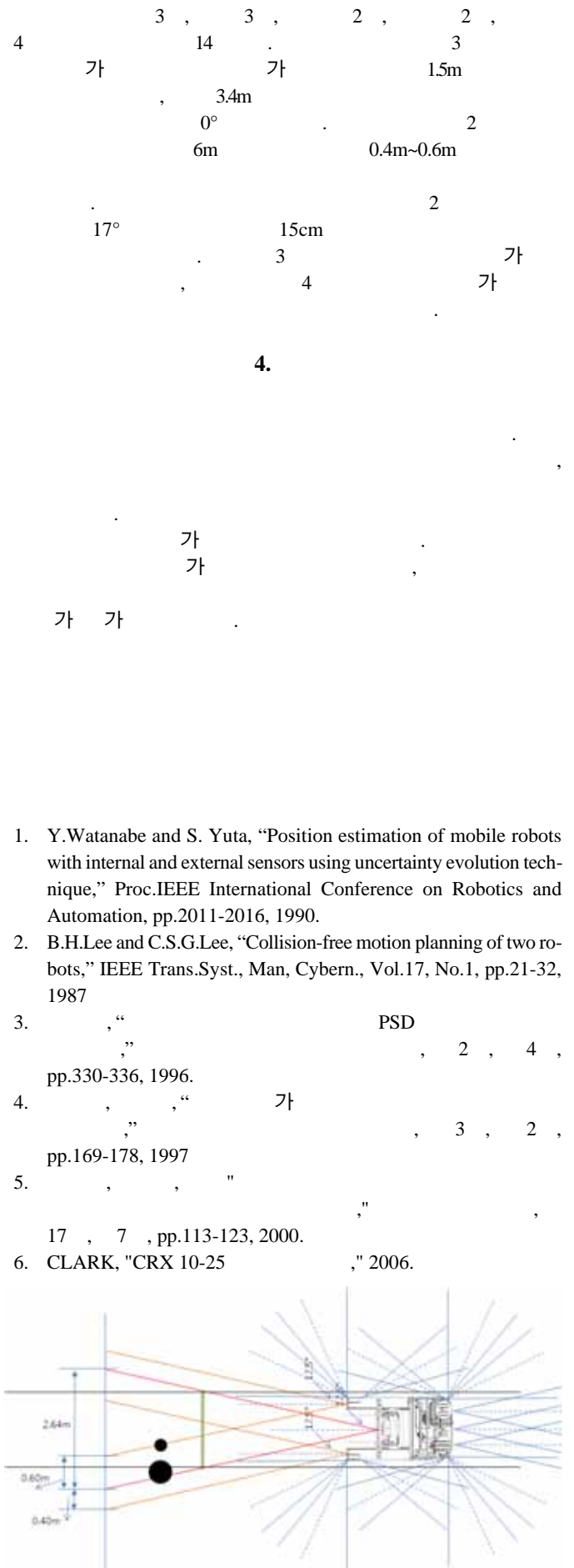


Fig. 4 Ultrasonic sensor layout for Obstacle detection

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