

GLASS WALLS AND DOORS DETECTION AND DISTANCE MEASURING FOR  
ROBOTS AND METHOD OF CONTROLLING THE SAME

ABSTRACT

5           A method for detecting glass wall with reflective surface for an autonomous  
system. The method comprises deploying at least one IR imaging device and at least one  
IR emitter on the autonomous system, wherein the IR imaging device comprises a field-  
of-view (FOV); emitting, by an IR thermal emitter, an IR thermal signature from the  
autonomous system, wherein the IR thermal signature is located outside of the FOV;  
10   detecting presence of the IR thermal signature that reflects on the reflective surface; and  
determining a distance and angle of the autonomous system from the reflective surface  
based on the reflected IR thermal signature within the FOV. The reflective surface will  
be identify as the glass wall. A sensor assembly and an autonomous system is also  
provided.

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FIG. 1