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**A SYSTEM AND METHOD FOR DETERMINING POSITION BASED ON
REFLECTED SIGNALS**

A system and method for determining position of, for example, a robot based on reflected signals comprises a transmitter for transmitting signals in a number of directions within a range of directions and a receiver for receiving echoes of the signals from any direction in the range. The transmitter has a first rotatable antenna and the receiver has a second rotatable antenna which is mechanically couplable to the second antenna. The received echoes are processed by a processor to derive echo data signals indicative of the distance of the system to one or more reflective surfaces and the direction of the reflective surface(s) relative to the system. The processor is arranged to determine the position of the system relative to a starting position from the derived echo data signals indicative of the distance of the system to the reflective surface(s) and the direction of the reflective surface(s) relative to the system.

[Fig. 4]