## Claims:

1. A robot sensor arrangement system, comprising a robot body on which at least one sensor assembly is arranged, wherein the sensor assembly comprises an image sensor and a first inertial sensor of which a position relative to the image sensors is fixed, wherein the image sensor and a first inertial sensor are fixed on a piece of rigid material, and the rigid material refers to a material that does not deform due to changes of vibration and temperature in the external physical conditions;

an included angle between the positions of the image sensor and a vertical axis is in a first angle range.

2. The robot sensor arrangement system according to claim 1, wherein the image sensor comprises a visible light image sensor and a depth image sensor of which the position relative to the visible light image sensor is fixed; the distances from the depth image sensor and the visible light image sensor to the ground are in a first distance value range, so that the field of view of the depth image sensor and the visible light image sensor covers a collection scope.

3. The robot sensor arrangement system according to claim 2, wherein the visible light image sensor and the first inertial sensor are fixed on at least one piece of rigid material.

4. The robot sensor arrangement system according to claim 1, wherein the first angle range is 5° - 90°.

5. The robot sensor arrangement system according to claim 2, wherein the first distance value range is 50 cm - 160 cm.

6. The robot sensor arrangement system according to any one of claims 1 to 5, wherein the sensor assembly comprises: an optical ranging sensor, a second inertial sensor and a mechanical odometer of which the positions relative to each other are fixed;

the mechanical odometer is fixed inside a robot wheel, and the optical ranging sensor and the second inertial sensor are on the same plane or the

vertical distance between the optical ranging sensor and the second inertial sensor is in a second distance value range.

7. The robot sensor arrangement system according to claim 6, wherein the second distance value range is 0 - 40 cm.

8. The robot sensor arrangement system according to claim 7, wherein the sensor assembly comprises an ultrasonic sensor of which the position relative to the optical ranging sensor is fixed, the collection direction of the ultrasonic sensor is the same as that of the optical ranging sensor, the position of the ultrasonic sensor is based on the scanning plane of the optical ranging sensor, and the distance from the ultrasonic sensor to the scanning plane is in a third distance value range, so that the ultrasonic sensor compensates for the optical ranging sensor in that the optical ranging sensor does not adequately sense transparent objects.

9. The robot sensor arrangement system according to claim 8, wherein the third distance value range is 0 - 40 cm.

10. The robot sensor arrangement system according to claim 9, wherein the sensors in the sensor assembly are all mounted on a rigid structure and constitute a whole by at least one piece of the rigid structure.