

Claims:

1. A wireless tag reading system, comprising:

- a) a frame;
- b) two or more antennas installed to the frame,
- c) a turntable rotatable with respect to the frame;

wherein the turntable is adapted to support thereon an object comprising one or more electronic tags; the turntable adapted to rotate the object with respect to the two or more antennas, so that at least one of the two or more antennas is configured to read the one or more electronic tags at more than one distance, orientation, or phase,

wherein the turntable is adapted to move along a linear direction by a conveying belt with respect to the frame from a first accessing position, in which a user is allowed to access the turntable, to a scanning position, in which the electronic tag on an object supported on the turntable is read by the two or more antennas; and

a sensing device for detecting whether the object is put on the turntable when the turntable is in the first accessing position; the turntable starting to move from the first accessing position toward the scanning position once the sensing device detected that the object has been placed on the turntable.

2. The wireless tag reading system according to claim 1, wherein the turntable continues to move along the linear direction to a second accessing position away from the frame after the reading is completed.

3. The wireless tag reading system according to claim 1, wherein the turntable returns to the first accessing position after the reading is completed.

4. The wireless tag reading system according to claim 1, wherein the turntable is fixed at a location in the scanning position with respect to the frame while still being rotatable; where the object placed on the conveying belt is adapted to be moved along a linear direction from the first accessing position; in which the object is accessible by a user, to the scanning position in which the object is moved onto the turntable.

5. The wireless tag reading system according to claim 1, wherein the sensing device is an infrared sensor.

6. The wireless tag reading system according to claim 1, wherein the reading is completed when a RFID reader connected to two or more antennas has accessed information in all of the one or more electronic tags, or the reading is completed after a period of time has elapsed.

7. The wireless tag reading system according to claim 1, wherein the turntable is adapted to rotate in a 90°, 180°, or 360° range.

8. The wireless tag reading system according to claim 1, wherein the frame is a housing, at the interior of which the two or more antennas are installed.

9. A wireless tag reading system, comprising:

- a) a frame;
- b) two or more antennas installed to the frame,
- c) a turntable rotatable with respect to the frame;

wherein the turntable is adapted to support thereon an object comprising one or more electronic tags; the turntable adapted to rotate the object with respect to the two or more antennas, so that at least one of the two or more antennas is configured to read the one or more electronic tags at more than one distance, orientation, or phase;

wherein the turntable is fixed at a location with respect to the frame while still being rotatable; the wireless tag reading system further comprising a conveying belt where the object placed on the conveying belt is adapted to be moved along a linear direction from a first accessing position; in which the object is accessible by a user, to a scanning position in which the object is moved onto the turntable; and

a sensing device for detecting whether the object is placed on the conveying belt; the conveying belt starting to move the object from the first accessing position toward the

scanning position once the sensing device detected that the object has been placed on the conveying belt.

10. A method for wirelessly reading electronic tags on an object, comprising the steps of:

- a) placing the object containing one or more electronic tags on a turntable;
- b) reading the one or more electronic tags by a plurality of antennas installed to a frame, and in the meantime rotating the object by the turntable;
- c) moving the turntable along a linear direction by a conveying belt with respect to the frame from a first accessing position, in which a user is allowed to access the turntable, to a scanning position, in which the electronic tag on the object supported on the turntable is read by the antennas;
- d) detecting whether the object is put on the turntable when the turntable is in the first accessing position; the turntable starting to move from the first accessing position toward the scanning position after detecting that the object has been placed on the turntable; and
- e) finishing reading the one or more electronic tags.

11. The method according to claim 10, wherein first accessing position is away from the frame and the scanning position is inside the frame.

12. The method according to claim 10, wherein the turntable is fixed at the scanning position with respect to the frame but being rotatable in the meantime; the conveying belt moving the object onto the turntable when the object is moved to the scanning position.

13. The method according to claim 10, further comprises the step of moving the object back to the first accessing position after the finishing step.

14. The method according to claim 10, further comprises the step of moving the object to a second accessing position away from the frame, which is different from the first accessing position.