

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: *****)	Art Unit: 3649
Serial No.: *****)	Examiner: *****
Filed: 06/20/2014)	Conf. No. 7470
Title: *****)	Docket No.: CYPRESS-002
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Response to 06/19/2015 Office Action

In response to the non-final rejection mailed on 06/19/2015, Applicant respectfully submits the following documents:

- CLAIM AMENDMENTS begin at page 2;
- REMARKS begin at page 6.

CLAIM AMENDMENTS

1. (Amended) A wireless gauge reader system for use on an existing electrical substation, the substation comprising a window through which at least one glow tube is visible, the glow tube illuminating depending on the status of the electrical substation, the wireless gauge reader system comprising:
 - a frame fastened to the substation; ~~and~~
 - a door in connection with the frame, the connection allowing the door to open and close, the door comprising a wireless gauge reader (WGR), the WGR comprising an optical sensor connected to a wireless transmitter, wherein the optical sensor is positioned to view the glow tube when the door is closed and adapted to transmit a wireless signal based on the illumination state of the at least one glow tube; the WGR further comprising a processor in communication with the optical sensor, wherein the processor determines the illumination state of the at least one glow tube by executing instructions comprising:
 - averaging every Nth pixel detected by the optical sensor to compute a dark level average;
 - performing a filter to smooth a line of pixels substantially centered along the glow tube;
 - determining a minimum and a maximum brightness value in the line of pixels, and comparing the values to a predetermined threshold; and
 - counting and summing all pixels with a brightness greater than the dark level average, and comparing the sum to a predetermined value.
2. (Original) The system of claim 1, wherein the connection of the door to the frame is adapted to allow a user to view the at least one glow tube when the door is opened.
3. (Original) The system of claim 1, wherein the connection of the door to the frame comprises at least one channel on the frame and the door is disposed of at least partially in the channel and adapted to slide along the channel.

4. (Original) The system of claim 1, wherein the connection of the door to the frame comprises at least one channel on the door and the frame is disposed of at least partially in the channel and the door is adapted to slide along the frame.
5. (Original) The system of claim 1, wherein the connection of the door to the frame comprises a hinge connected to the frame and the door, and the door is adapted to rotate about the hinge.
6. (Original) The system of claim 1, wherein the connection of the door to the frame comprises a pivot connecting the frame to the door, and the door is adapted to rotate about the pivot.
7. (Original) The system of claim 1, wherein the door is constructed so as to block a portion of light from entering the window when the door is closed.
8. (Original) The system of claim 1, wherein the door is constructed so as to block glare from ambient that may be detected by the optical sensor.
9. (Original) The system of claim 1, wherein when the door is closed the optical sensor is at a position relative to the least one glow tube, and when the door is opened and then closed, the optical sensor returns to substantially the same position.
10. (Original) The system of claim 1, wherein when the door is closed the optical sensor is at a position relative to the least one glow tube, and wherein the WGR is detachably connected to the door such that when the WGR is removed and a new WGR is installed in its place, or the original WGR is re-installed, the optical sensor returns to substantially the same position when door is closed.
11. (Original) The system of claim 1, further comprising:

a wireless receiver adapted to receive the wireless signal wherein the receiver is connected to a network and adapted to report the illumination status of the at least one glow tube over the network.

12. (Original) The system of claim 10, wherein the network a cellular network, a public network or a private network.
13. (Original) The system of claim 1, wherein the door comprises a second wireless gauge reader (2nd WGR), the 2nd WGR comprising a second optical sensor connected to a second wireless transmitter, wherein the second optical sensor is positioned to view a second glow tube when the door is closed and adapted to transmit a second wireless signal based on the illumination state of the second glow tube.
14. (Original) The system of claim 13, wherein the transmitter and second transmitter comprise a single transmitter.
15. (Original) The system of claim 1, wherein the frame is fastened to the substation by a fastener selected from a group consisting of: screws, bolts, rivets, adhesives, magnets, suction cups or hook-and-loop fasteners.
16. (Amended) The system of claim 1, wherein ~~the WGR comprises a processor connected to the optical sensor, wherein the processor processes an image of the at least one glow tube captured by the optical sensor, and~~ the wireless signal comprises data from the processor.
17. (Original) The system of claim 1, wherein the wireless signal comprises an image of the at least one glow tube captured by the optical sensor.
18. (Original) The system of claim 1, wherein the optical sensor has a field of view that includes the at least one glow tube and a second glow tube, and the wireless signal is based on the illumination state of the second glow tube.

19. (Original) The system of claim 1, further comprising an indicator that indicates the illumination state of the at least one glow tube.

20. (Original) The system of claim 1, further comprising an actuation button that causes the WGR to determine the illumination state of the at least one glow tube.

REMARKS

Claims 1-20 are pending in the Application. Claims 1-20 have been rejected. In the present response, Claims 1 and 16 have been amended. Support for the amendment can be found throughout the specification, including paragraph 50.

Claims 1-20 were rejected under 35 U.S.C. §103 as being unpatentable over Papson (US 8,829,412, hereinafter Papson) in view of Valoff et. al. (US 2009/0183584, hereinafter Valoff). The Examiner also lists as references Derkalousdian (US 2009/0190795, hereinafter Derkalousdian), Sim et (US 2009/0034788, hereinafter Sim '788) and US 2008/0148877, hereinafter Sim '877).

Applicant respectfully traverses the rejection because none of the prior art discloses, teaches nor suggests a wireless gauge reader system having a processor which applies an algorithm to process an image of the glow tube captured by the optical sensor in order to determine the illumination state of the glow tube.

With regards to this ground for distinction, Applicant has amended claims 1 and 16 as follows:

1. (Amended) A wireless gauge reader system for use on an existing electrical substation, the substation comprising a window through which at least one glow tube is visible, the glow tube illuminating depending on the status of the electrical substation, the wireless gauge reader system comprising:
 - a frame fastened to the substation; ~~and~~
 - a door in connection with the frame, the connection allowing the door to open and close, the door comprising a wireless gauge reader (WGR), the WGR comprising an optical sensor connected to a wireless transmitter, wherein the optical sensor is positioned to view the glow tube when the door is closed and adapted to transmit a wireless signal based on the illumination state of the at least one glow tube; the WGR further comprising a processor in communication with the optical sensor, wherein the processor determines the illumination state of the at least one glow tube by executing instructions comprising:

averaging every Nth pixel detected by the optical sensor to compute a dark level average;
performing a filter to smooth a line of pixels substantially centered along the glow tube;
determining a minimum and a maximum brightness value in the line of pixels, and comparing the values to a predetermined threshold;
and
counting and summing all pixels with a brightness greater than the dark level average, and comparing the sum to a predetermined value.

16. (Amended) The system of claim 1, wherein ~~the WGR comprises a processor connected to the optical sensor, wherein the processor processes an image of the at least one glow tube captured by the optical sensor, and the wireless signal comprises data from the processor.~~

Support for this amendment is found in paragraph 50 of the Specification. None of the prior art discloses the claimed method.

For all of the above reasons, Applicant respectfully submits that claims 1-20 are novel and nonobvious and stand in condition for allowance. Accordingly, withdrawal of the rejection of claims 1-20 is appropriate and respectfully requested. Applicant respectfully traverses and explicitly does not acquiesce to the other stated reasons for rejecting the pending claims but does not address them further at this time because the present amendment and remarks render them moot. Applicant reserves the right to argue these points at a later time if necessary.

CONCLUSION

Claims 1-20 are in condition for allowance and such action is respectfully requested. If the Examiner's next action is other than for allowance of the above Claims or if the Examiner has any questions or comments with respect to the above-identified case, the Examiner is respectfully invited to telephone the undersigned.

Respectfully,

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Attorney for Applicant, Reg. #*****