CLAIMS

1. A system (10), for facilitating communication between a trap (20) and a consumable (30), comprising

   i) a trap (20), with a data capture means (40) for capturing data (50) and sending the data to a system operator (60);

   ii) one or more consumables (30), each provided with a device (70) which has associated therewith an electronic identification code (80); and

   iii) means for determining a status (90) of the consumable which can be read by the data capture means (40) of the trap (20) and relayed back to the system operator (60)

   wherein the consumable can be a glue board (32) with a sensor (100) affixed or positioned in close proximity to a back face (35) of the glue board, the sensor (100) is configured to detect flying insects by mutual capacitance sensing and comprises a sensor conductor (12) which is a transmit electrode (Tx), and two electrically conductive un-grounded conductors (14a; 14b) which are receive electrodes (Rx) which are disposed one on either side of the sensor conductor (12) to form a triplet (14a-12-14b), said conductors (12, 14a, 14b) being supported on an un-grounded conductive substrate (18) which is electrically isolated by an electrical insulator (16) from said conductors (12, 14a, 14b) to act as a shield or guard, wherein each conductor (14a,12;14b) is of a width, and thickness, and is spaced by a distance from another and the ungrounded conductive substrate (18) such that the sensor is designed and configured to generate a directional fringe field which is responsive to the flying insect and the sensor comprises a grid array (200) of sensor triplets comprising a plurality of rows (210, 220, 230 etc); or wherein the consumable can also be a UV emitting lightbulb, wherein when the consumable is the UV emitting light bulb, the means for determining a status of the consumable can detect a parameter indicating that the bulb has failed or is performing at levels significantly below optimal levels.

2. The system as claimed in claim 1 wherein the device (70) is a RFID tag.

3. The system as claimed in claim 2 wherein the RFID tag is a near field sensing tag.

4. The system as claimed in any of the preceding claims wherein the trap comprises a RFID reader.

5. The system as claimed in claim 1 wherein the glue board has grid lines (33) marked thereon defining a regular area (34).

6. The system as claimed in claim 4 or 5 wherein the glue board has differentially coloured grid areas.

7. The system as claimed in any of the preceding claims wherein an adhesive (36) covers a capture surface (37) on a front surface (38) of the glue board (32).

8. The system as claimed in claim 1 wherein each row comprises a common multiple “E” shaped electrode string (212, 222, 232 etc).

9. The system as claimed in claim 1 or 8 wherein each row comprises a plurality of “C” shaped electrodes (214, 224, 234 etc).

10. The system as claimed in claim 9 when dependent upon claim 1 wherein a change in fringe is detected on either side of each arm of the “C” shaped electrodes.

11. The system as claimed in any of claims 1, or 8 to 10 which comprises a fringe modifying electrode (Fx) behind the receive (Rx) and transmit (Tx) electrodes, which modifies the projection of the fringe generated.

12. The system as claimed in any of the preceding claims further comprising a light bulb (31).

13. A glue board (32) comprising a back face (35) and a capture surface (37) having an adhesive (36) thereon wherein a sensor (100) is affixed to or is positioned in close proximity to the back face (35) of the glue board, the sensor (100) is configured to detect flying insects by mutual capacitance sensing and comprises a sensor conductor (12) which is a transmit electrode (Tx), and two electrically conductive un-grounded conductors (14a; 14b) which are receive electrodes (Rx) which are disposed on either side of the sensor conductor (12) to form a triplet (14a-12-14b), said conductors (12, 14a, 14b) being supported on an un-grounded conductive substrate (18) which is electrically isolated by an electrical insulator (16) from said conductors (12, 14a, 14b) to act as a shield or guard, wherein each conductor (14a,12;14b) is of a width, and thickness, and is spaced by a distance from another and the ungrounded conductive substrate (18) such that the sensor is designed and configured to generate a directional fringe field which is responsive to the flying insect and the sensor comprises a grid array (200) of sensor triplets comprising a plurality of rows (210, 220, 230 etc).

14. An insect trap (20) comprising a glue board (32) as claimed in claim 13.

15. The glue board (34) or an insect trap (20) as claimed in claims 13 or 14 wherein each row comprises a common multiple “E” shaped electrode string (212, 222, 232 etc).

16. The glue board (34) or an insect trap (20) as claimed in claims 15 wherein each row comprises a plurality of “C” shaped electrodes (214, 224, 234 etc).

17. The glue board (34) or the insect trap (20) as claimed in claim 16 wherein a change in fringe is detected on either side of each arm of the “C” shaped electrodes.

18. The glue board (34) or the insect trap (20) as claimed in any of claims 13 to 17 which comprises a fringe modifying electrode (Fx) behind the receive (Rx) and transmit (Tx) electrodes, which modifies the projection of the fringe generated.

19. A method of reporting to a system operator on whether a trap (20) consumable (30) needs replacing comprises

i) capturing data (50) relating to a consumables’ (30) status information (90);

ii) utilising a means (40) provided on the trap (20) to communicate with a device (70) provided on the consumable (30) which has associated therewith an electronic identification code (80); and

iii) relaying the data (50) back to a system operator (60)

wherein the consumable is a glue board (32) with a sensor (100) affixed or positioned in close proximity to a back face (35) of the glue board, the sensor (100) is configured to detect flying insects by mutual capacitance sensing and comprises a sensor conductor (12) which is a transmit electrode (Tx), and two electrically conductive un-grounded conductors (14a; 14b) which are receive electrodes (Rx) which are disposed on either side of the sensor conductor (12) to form a triplet (14a-12-14b), said conductors (12, 14a, 14b) being supported on an un-grounded conductive substrate (18) which is electrically isolated by an electrical insulator (16) from said conductors (12, 14a, 14b) to act as a shield or guard, wherein each conductor (14a,12;14b) is of a width, and thickness, and is spaced by a distance from another and the ungrounded conductive substrate (18) such that the sensor is designed and configured to generate a directional fringe field which is responsive to the flying insect and the sensor comprises a grid array (200) of sensor triplets comprising a plurality of rows (210, 220, 230 etc).

20. The method as claimed in claim 19 further comprising a consumable that is a light bulb (31), wherein the method reports that the light bulb has failed, is performing at an ineffective level, or requires servicing.

21. The method as claimed in claim 20 wherein, where the consumable is a glue board the method reports that the glue board has captured a pre-set number of flying insects, is performing at an ineffective level or requires servicing.

22. The method for determining a fly captured on a glue board (32) comprising counting the number of flies captured using a sensor (100) affixed or positioned in close proximity to a back face (35) of the glue board, the sensor (100) is configured to detect flying insects by mutual capacitance sensing and comprises a sensor conductor (12) which is a transmit electrode (Tx), and two electrically conductive un-grounded conductors (14a; 14b) which are receive electrodes (Rx) which are disposed on either side of the sensor conductor (12) to form a triplet (14a-12-14b), said conductors (12, 14a, 14b) being supported on an un-grounded conductive substrate (18) which is electrically isolated by an electrical insulator (16) from said conductors (12, 14a, 14b) to act as a shield or guard, wherein each conductor (14a,12;14b) is of a width, and thickness, and is spaced by a distance from another and the ungrounded conductive substrate (18) such that the sensor is designed and configured to generate a directional fringe field which is responsive to the flying insect and the sensor comprises a grid array (200) of sensor triplets comprising a plurality of rows (210, 220, 230 etc); and reporting catch data back to a system operator (60).