CLAIMS

1. A screen printer, comprising

a stencil having a plurality of apertures;

a paste dispenser arranged to dispense a paste material through the plurality of apertures of the stencil to form a print pattern of the paste material on an electronic device;

an image capturing device arranged to capture at least one image of the plurality of apertures of the stencil;

a processor operative to select which of the apertures of the stencil require cleaning based on the at least one captured image; and

a cleaning device arranged to clean the selected apertures.

2. The screen printer according to claim 1, wherein the cleaning device includes an air jet module arranged to discharge jets of air for cleaning the selected apertures.

3. The screen printer according to claim 2, wherein the air jet module includes at least one air nozzle, and a resiliently biased cap supported by the at least one air nozzle which is movable relative to the air nozzle.

4. A screen printer according to claim 3, wherein the at least one nozzle includes a plurality of air channels for enabling air from the air nozzle to escape to lift the resiliently biased cap away from the air nozzle.

5. The screen printer according to claim 1, wherein the image capturing device is operative to capture multiple images of the plurality of apertures of the stencil with each image showing different selections of the plurality of apertures.

6. The screen printer according to claim 1, wherein the image capturing device includes a fiducial camera for fiducial recognition as well as for capturing the at least one image of the plurality of apertures.

7. The screen printer according to claim 1, wherein the image capturing device includes a camera for capturing the at least one image of the plurality of apertures, and a fiducial camera for fiducial recognition.

8. The screen printer according to claim 1, wherein the processor is operative to compare the at least one captured image with at least one reference image to determine if amount of blockage of the apertures shown in the at least one image exceeds a threshold; wherein apertures having blockages which exceed the threshold are selected for cleaning.

9. The screen printer according to claim 1, wherein the cleaning device includes a paper cleaning module for cleaning the selected apertures.

10. A method of cleaning a stencil of a screen printer, the stencil having a plurality of apertures through which a paste material is dispensed to form a print pattern of the paste material on an electronic device, the method comprising
(i) capturing at least one image of the plurality of apertures;
(ii) selecting which of the apertures require cleaning based on the at least one captured image; and
(iii) cleaning the selected apertures.

11. The method according to claim 10, wherein the step of cleaning the selected apertures includes discharging jets of air for cleaning the selected apertures.

12. The method according to claim 11, wherein the jets of air comprise pulsating jets of air.

13. The method according to claim 10, further comprising capturing multiple images with each image showing different selections of the plurality of apertures.

14. The method according to claim 10, wherein the selection includes
comparing the at least one captured image with at least one reference image;
from the comparison, determining if an amount of blockage of the apertures shown in the at least one image exceeds a threshold; and
selecting the apertures having blockages which exceed the threshold for cleaning.

CLAIMS

1. A screen printer, comprising

a stencil having a plurality of apertures;

a paste dispenser arranged to dispense a paste material through the plurality of apertures of the stencil to form a print pattern of the paste material on an electronic device;

an image capturing device arranged to capture at least one image of the plurality of apertures of the stencil;

a processor operative to select which of the apertures of the stencil require cleaning based on the at least one captured image; and

a cleaning device arranged to clean the selected apertures,

wherein the cleaning device includes an air jet module arranged to discharge jets of air for cleaning the selected apertures, and

wherein the air jet module includes at least one air nozzle, and a resiliently biased cap supported by the at least one air nozzle which is movable relative to the air nozzle.

2. A screen printer according to claim 1, wherein the at least one nozzle includes a plurality of air channels for enabling air from the air nozzle to escape to lift the resiliently biased cap away from the air nozzle.

3. The screen printer according to claim 1 or claim 2, wherein the image capturing device is operative to capture multiple images of the plurality of apertures of the stencil with each image showing different selections of the plurality of apertures.

4. The screen printer according to any one of the preceding claims, wherein the image capturing device includes a fiducial camera for fiducial recognition as well as for capturing the at least one image of the plurality of apertures.

5. The screen printer according to any one of the preceding claims, wherein the image capturing device includes a camera for capturing the at least one image of the plurality of apertures, and a fiducial camera for fiducial recognition.

6. The screen printer according to any one of the preceding claims, wherein the processor is operative to compare the at least one captured image with at least one reference image to determine if amount of blockage of the apertures shown in the at least one image exceeds a threshold; wherein apertures having blockages which exceed the threshold are selected for cleaning.

7. The screen printer according to any one of the preceding claims, wherein the cleaning device includes a paper cleaning module for cleaning the selected apertures.

8. A method of cleaning a stencil of a screen printer, the stencil having a plurality of apertures through which a paste material is dispensed to form a print pattern of the paste material on an electronic device, the method comprising

(i) capturing at least one image of the plurality of apertures;

(ii) selecting which of the apertures require cleaning based on the at least one captured image; and

(iii) cleaning the selected apertures with a cleaning device;

wherein the cleaning device includes an air jet module arranged to discharge jets of air for cleaning the selected apertures, and the air jet module includes at least one air nozzle, and a resiliently biased cap supported by the at least one air nozzle which is movable relative to the air nozzle.

9. The method according to claim 8, wherein the step of cleaning the selected apertures includes discharging jets of air for cleaning the selected apertures.

10. The method according to claim 9, wherein the jets of air comprise pulsating jets of air.

11. The method according to any one of claims 8 to 10, further comprising capturing multiple images with each image showing different selections of the plurality of apertures.

12. The method according to any one of claims 8 to 11, wherein the selection includes comparing the at least one captured image with at least one reference image; from the comparison, determining if an amount of blockage of the apertures shown in the

at least one image exceeds a threshold; and selecting the apertures having blockages which exceed the threshold for cleaning.