CLAIMS:

1. A computer-implemented method for providing visual feedback to a user of a rotary shaver, the method comprising:

(i) receiving movement measurements representing movement of the rotary shaver during a shaving operation;

(ii) processing the received movement measurements to determine a representation of a trajectory of movement of the rotary shaver during the shaving operation;

(iii) processing the determined representation to project the representation onto a two-dimensional plane;

(iv) generating a graphical user interface, GUI, the GUI including the projected representation and a graphical template comprising an annular target zone for a correct circular motion of the rotary shaver during the shaving operation; and

(v) displaying the generated GUI using a display unit.

2. The method as claimed in claim 1, the method further comprising repeating steps (ii)-(iv) for further received movement measurements to generate an updated GUI, and displaying the generated updated GUI using the display unit.

3. The method as claimed in claim 1 or 2, the method further comprises the step of:

comparing the projected representation to one or more boundaries represented by the annular target zone; and

wherein the step of generating the GUI further comprises generating the GUI to further include a visual element based on a result of the comparison.

4. The method as claimed in claim 1, 2 or 3, wherein the step of generating the GUI comprises:

determining an alignment of the projected representation with the graphical template; and

generating the GUI with the projected representation overlaid on the graphical template according to the determined alignment.

5. The method as claimed in any of claims 1-4, wherein the step of processing the received movement measurements to determine the representation of the trajectory of movement comprises filtering to remove high frequency components in the movement measurements.

6. The method as claimed in any of claims 1-5, wherein the step of processing the determined representation to project the representation onto a two-dimensional plane comprises:

for a plurality of movement measurement samples in the received movement measurements, computing an orientation of an instant tangent plane based on a previous plurality of measurement samples;

projecting the movement measurement samples onto the instant tangent plane;

aligning the projected movement measurement samples with previously-projected movement measurement samples; and

applying de-trending to the aligned projected movement measurement samples.

7. The method as claimed in any of claims 1-6, wherein the method further comprises the step of:

processing the projected representation to determine values for one or more characteristics of the movement of the rotary shaver; and

wherein the step of generating the GUI further comprises generating the GUI to further include the determined value or determined values.

8. A computer program product comprising a computer readable medium having computer readable code embodied therein, the computer readable code being configured such that, on execution by a suitable computer or processor, the computer or processor is caused to perform the method of any of claims 1-7.

9. An apparatus for providing visual feedback to a user of a rotary shaver, the apparatus comprising:

a display unit; and

a processing unit that is configured to:

receive movement measurements representing movement of the rotary shaver during a shaving operation;

process the received movement measurements to determine a representation of a trajectory of movement of the rotary shaver during the shaving operation;

process the determined representation to project the representation onto a two-dimensional plane;

generate a graphical user interface, GUI, the GUI including the projected representation and a graphical template comprising an annular target zone for a correct circular motion of the rotary shaver during the shaving operation; and

display the generated GUI using the display unit.

10. The apparatus as claimed in claim 9, the processing unit is further configured to:

compare the projected representation to one or more boundaries represented by the annular target zone; and

wherein the processing unit is configured to generate the GUI to further include a visual element based on a result of the comparison.

11. The apparatus as claimed in claim 9 or 10, wherein the processing unit is configured to generate the GUI by:

determining an alignment of the projected representation with the graphical template; and

generating the GUI with the projected representation overlaid on the graphical template according to the determined alignment.

12. The apparatus as claimed in any of claims 9-11, wherein the processing unit is configured to process the received movement measurements to determine the representation of the trajectory of movement by filtering to remove high frequency components in the movement measurements.

13. The apparatus as claimed in any of claims 9-12, wherein the processing unit is configured to process the determined representation to project the representation onto a two-dimensional plane by:

for a plurality of movement measurement samples in the received movement measurements, computing an orientation of an instant tangent plane based on a previous plurality of measurement samples;

projecting the movement measurement samples onto the instant tangent plane;

aligning the projected movement measurement samples with previously-projected movement measurement samples; and

applying de-trending to the aligned projected movement measurement samples.

14. The apparatus as claimed in any of claims 9-13, wherein the processing unit is further configured to:

process the projected representation to determine values for one or more characteristics of the movement of the rotary shaver; and

wherein the processing unit is configured to generate the GUI to further include the determined value or determined values.

15. A system, comprising:

a rotary shaver; and

an apparatus for providing visual feedback to a user of the rotary shaver as claimed in any of claims 9-14.