CLAIMS

1. A system comprising:

a sensor configured to measure an ankle angle,

a display,

a controller comprising at least one processor, wherein the controller is configured to perform operations including:

operating a sensor to generate a first signal representative of ankle angle over a first period of time;

determining, based on the first signal, a range of angles detected over the first period of time;

operating a display to provide an indication to prime a repetitive motor movement, wherein the indication represents at least a portion of the repetitive motor movement;

operating the sensor to generate a second signal representative of ankle angle over a second period of time;

during the second period of time, mapping the second signal to a user location relative to the repetitive motor movement; and

during the second period of time, operating the display to update the indication that represents the repetitive motor movement, wherein operating the display to update the indication that represents the repetitive motor movement includes updating a location, relative to the representation of the repetitive motor movement, of a cursor according to the user location.

2. The system of claim 1, wherein the repetitive motor movement consists of multiple identical cycles of a periodic motion spanning the second period of time.

3. The system of claim 2, wherein providing an indication to prime a repetitive motor movement comprises providing an indication that represents at least one full cycle of the repetitive motor movement.

4. The system of claim 2 or 3, wherein providing an indication to prime a repetitive motor movement comprises providing an indication that represents at least 1.5 full cycles of the repetitive motor movement.

5. The system of any one of claims 1-4, wherein providing an indication to prime a repetitive motor movement comprises providing an indication of a plurality of discrete symbols.

6. The system of claim 5, wherein the operations further comprise:

determining a distance between the location of the cursor and a location of a particular symbol of the plurality of discrete symbols;

determining that the distance is less than a distance threshold value; and

responsive to determining that the distance is less than the distance threshold value, incrementing or decrementing a counter, wherein the counter is visible on the display.

7. The system of claim 6, wherein the operations further comprise:

responsive to determining that the distance is less than the distance threshold value, operating the display to remove at least a portion of the indication from the display.

8. The system of any preceding claim, wherein mapping the second signal to the user location relative to the repetitive motor movement comprises mapping the second signal to the user location relative to the repetitive motor movement such that 80% of the detected range of angles is mapped to a full range of the repetitive motor movement.

9. The system of any preceding claim, wherein the operations further comprise:

deriving, from the second signal, a quantitative measurement of a user's performance of the repetitive motor movement;

comparing the quantitative measurement to a goal threshold;

operating the sensor to generate a third signal representative of ankle angle over a third period of time;

during the third period of time, mapping the third signal to a user location relative to the repetitive motor movement; and

during the third period of time, operating the display to update the indication that represents the repetitive motor movement, wherein operating the display to update the indication that represents the repetitive motor movement includes updating a location, relative to the representation of the repetitive motor movement, of the cursor according to the user location.

10. The system of claim 9, wherein operating the display during the second period of time to update the indication that represents the repetitive motor movement comprises updating the indication such that the representation of the repetitive motor movement is translated across the display at a first speed and wherein operating the display during the third

period of time to update the indication that represents the repetitive motor movement comprises updating the indication such that the representation of the repetitive motor movement is translated across the display at a second speed.

11. The system of claim 10, wherein the operations further comprise determining the quantitative measure is less than the goal threshold and, responsive to determining the quantitative measure is less than the goal threshold, operating the display such that the second speed is less than the first speed.

12. The system of claim 10 or 11, wherein the operations further comprise determining the quantitative measure is greater than the goal threshold and, responsive to determining the quantitative measure is greater than the goal threshold, operating the display such that the second speed is greater than the first speed.

13. The system of any preceding claim, wherein the second period of time is between 18 and 22 minutes.

14. The system of any one of claims 9-13, wherein the third period of time is between 8 and 12 minutes.

15. The system of any preceding claim, wherein the sensor detects ankle rotation only around a single axis.

16. The system of any preceding claim, wherein the sensor is integrated into a garment.

17. The system of any preceding claim, wherein the display is operably connected to at least one of a smart phone, tablet, computer, or other device adapted to receive wireless input signals.

18. The system of any preceding claim, wherein the sensor is operably connected to a smart phone or smart watch.

19. A method for generating a visualization of ankle motion, the method comprising:

operating a sensor to generate a first signal representative of ankle angle over a first period of time;

determining, based on the first signal, a range of angles detected over the first period of time;

operating a display to provide an indication to prime a repetitive motor movement, wherein the indication represents at least a portion of the repetitive motor movement;

operating the sensor to generate a second signal representative of ankle angle over a second period of time;

during the second period of time, mapping the second signal to a user location relative to the repetitive motor movement; and

during the second period of time, operating the display to update the indication that represents the repetitive motor movement, wherein operating the display to update the indication that represents the repetitive motor movement includes updating a location, relative to the representation of the repetitive motor movement, of a cursor according to the user location.

20. A non-transitory computer-readable medium, having stored thereon program instructions that, upon execution by the controller, cause the controller to perform the method of claim 19.