Claims

1. A system comprising:

a display device;

a sensor for detecting eye movement of a subject in response to a stimulus displayed by the display device;

a support device for seating the subject, wherein the support device is adjustable to position the subject in an orientation with respect to the display device and the sensor that allows for collection of eye movement data, and wherein the support device, once positioned, confines the subject in said orientation; and

a frame that supports each of the display device, the sensor for detecting eye movement of the subject, and the support device for seating the subject.

2. The system of claim 1, wherein the frame comprises wheels.

3. The system of claim 2, wherein the frame further comprises brakes coupled to the wheels.

4. The system of claim 1, wherein the support device comprises a partition to minimize visual distractions from the subject's field-of-view.

5. The system of claim 1, wherein the support device is configured to recline.

6. The system of claim 1, wherein the support device comprises an adjustable head rest.

7. The system of claim 6, wherein the head rest limits a range of head movements of the subject.

8. The system of claim 1, wherein the support device is configured to swivel about an axis.

9. The system of claim 1, wherein the display device is adjustable to a plurality of positions with respect to the subject.

10. The system of claim 1, wherein the sensor is adjustable to a plurality of positions with respect to the subject.

11. The system of claim 1, further comprising a second display device configured to display images of the subject to an operator.

12. The system of claim 1, further comprising a network interface for communicating the detected eye movement of the subject to a network.

13. The system of claim 1, wherein the system is used for assessment, screening, monitoring, or diagnosis of developmental or cognitive conditions in the subject.

14. A method for collecting data from eye tracking equipment, the method comprising:

causing display of a first visual image;

after the first visual image is displayed, causing display of a fixation target in place of the first visual image;

receiving data from the eye tracking equipment that indicates eye movement of a subject with respect to the displayed fixation target; and

in response to receiving the data indicating eye movement of the subject, causing display of a second visual image in place of the fixation target.

15. The method of claim 14, wherein the fixation target triggers reflexive eye movement of the subject.

16. The method of claim 14, wherein the eye movement of the subject is elicited without verbal instruction.

17. The method of claim 14, further comprising:

identifying a fixation from the data indicating eye movement of the subject;

calculating a fixation location coordinate for the fixation; and

determining whether the fixation location coordinate is within a proximity threshold of a known target location coordinate for the displayed fixation target.

18. The method of claim 17, wherein the data indicating eye movement of the subject is rejected for calibration purposes if the fixation location coordinate is not within the proximity threshold.

19. The method of claim 17, further comprising receiving a manual indication from an operator that identifies the fixation from an observed fixation by the operator.

20. The method of claim 17, further comprising receiving a manual indication from an operator that corroborates the identified fixation with an observed fixation by the operator.

21. The method of claim 14, further comprising determining whether the received data indicates any of a blink, saccade, or smooth pursuit during the eye movement of the subject with respect to the displayed fixation target.

22. The method of claim 21, wherein the data indicating eye movement of the subject is rejected for calibration purposes, at least in part, if the received data indicates any of a blink, saccade, or smooth pursuit during the eye movement of the subject with respect to the displayed fixation target.

23. The method of claim 14, wherein the data indicating eye movement of the subject is rejected for calibration purposes if the data does not include a fixation.

24. The method of claim 14, wherein the first visual image is different than the second visual image.

25. The method of claim 14, wherein the first visual image is the same as the second visual image.

26. The method of claim 14, further comprising causing display of one or more subsequent fixation targets in place of the second visual image.

27. The method of claim 26, wherein a respective visual image is displayed after each respective subsequent fixation target is displayed.

28. The method of claim 27, wherein each respective visual image is different than the first and second visual images.

29. The method of claim 27, wherein each respective visual image is the same as the first and second visual images.

30. The method of claim 26, wherein each respective subsequent fixation target has a respective target location coordinate.

31. The method of claim 14, wherein the fixation target is displayed in response to a manual indication from an operator observing the subject.

32. The method of claim 14, wherein the visual image is selected based upon an attribute of the subject.

33. The method of claim 32, wherein the attribute is age of the subject.

34. The method of claim 14, wherein the first and second visual images are dynamic visual images.

35. The method of claim 14, wherein the method is used for assessment, screening, monitoring, or diagnosis of developmental or cognitive conditions in the subject.

36. A method for correcting spatial inaccuracy in eye tracking data, the method comprising:

receiving eye tracking data recorded during display of a stimulus to a subject, wherein the stimulus includes a fixation target that elicits a fixation by the subject;

identifying the fixation in the received eye tracking data;

calculating a difference between target location coordinates associated with the fixation target and fixation location coordinates associated with the fixation;

storing the calculated difference between the target location coordinates and the fixation location coordinates as vector data; and

transforming the vector data to align the fixation location coordinates with the target location coordinates.

37. The method of claim 36, wherein the transforming comprises performing mathematical operations selected from the group consisting of trilinear interpolation, linear interpolation in barycentric coordinates, affine transformation, and piecewise polynomial transformation.

38. The method of claim 36, wherein the method is used for assessment, screening, monitoring, or diagnosis of developmental or cognitive conditions in the subject.