INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
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PR No. 1000035442   **Rfx No. 6100001519**

Technical specification for Remote desktop-mounted Eye-Tracker system

1. "Remote desktop-mounted Eye-Tracker system" for cognitive science experiments.
2. For the below-mentioned specifications, hardware, software, and accessories must be supplied.
3. Remote eye-tracking hardware must be supplied, and include all future firmware and software upgrades.
4. **GUI-based:** 1) Experiment builder software, 2) data visualization software, and 3) data analysis software produced by OEM must be supplied. Clearly mention the name of each software and its features and functionality in an annexure. Software licenses should be perpetual.
5. Fully functional SDK allows access to Matlab/Python to create custom experiments to collect data from eye-tracking hardware. If updates need to be purchased, please mention the terms clearly. Windows 10/RedHat Linux/Mac OSX or higher compatibility is to be included.
6. Eye tracking technique (Ocularity): Binocular and monocular tracking (both) should track the eyes of humans over about 10 months of age, regardless of ethnic origin and include most corrective devices such as glasses or soft contact lenses.
7. Data sampling frequency: Minimum 1000 Hz/second for Binocular tracking.
8. Accuracy: 0.5° or Less as determined by calibration
9. Spatial Resolution or Precision: 0.06° RMS or less unfiltered
10. Tracking distance: 55-70 cm
11. Freedom of head movement: Minimum freedom of head movement (width x height) allowed at a distance of 60cm should be 22 cm x 22 cm, and at a distance of 70 cm should be 25 cm x 25 cm.
12. Total System Latency for data: Must be less than 5 ms @600Hz (SD < 0.2 ms) (Indeterministic) or better
13. Real-time Data Access: Yes
14. Data Output: Raw and calibrated eye position, pupil size, digital inputs, blink detection.
15. Blink recovery time: Must be one frame or instantaneous
16. Gaze recovery time: Must be less than 150 ms
17. Illuminators: A compatible illuminator must be supplied and IR wavelength should be clearly mentioned.
18. Digital IN and OUT: Must be supplied with dedicated Eye tracker Connectors for an 8-bit TTL input port; a similar output port could also be provided.
19. Recorded eye-tracking data compatible with SPSS, MATLAB and other statistical software suites

20. Power options: Should be compatible with an Indian power system (220-240 V AC, 50 Hz)
21. Warranty: Minimum two years warranty.
22. Technical Support: After the warranty period, technical support is mandatory for 3 years.
23. Button box: a millisecond-precise USB button box (with a minimum of four buttons) should be supplied for use with the system
24. Eye-tracker Mount: Clearly mention how the eye-tracker is mounted and any other mounts available for purchase. The optimal range of the operation with the supplied mount and lenses should be clearly mentioned.
25. Head support: A chinrest and forehead rest must be supplied.
26. Pupil size accuracy: Pupil size accuracy should be clearly stated.
27. Blink/Eye recovery time: Blink recovery time and eye recovery time should be stated.
28. Blink recovery time should be a maximum of a single frame time.
29. Installation and training: remote/virtual training is mandatory.
30. Attach 3 publications in the last 5 years in top-rated peer-reviewed journals using the above-mentioned hardware and software.
31. During technical scrutiny, we may ask the vendor to demonstrate the wholistic functionality of hardware and software in an online or offline mode.