

A new platform for measuring infants' visual capabilities

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Developmental Disorders (DD) involve a high percentage of children and account for a high number of permanent disabilities with huge costs for the person, the family and the society.

The aim of this work is to develop a new platform for developmental screening that can be used for studying, measuring and analyzing infants' visual capabilities between 3 and 12 months of life. The platform is composed by a mechanical structure with five monitors and speakers for infants' audio-visual stimulation and a gaze tracker to monitor and measure their attention and gaze movements. The five screens are placed in specific positions: one in the center, two on the right side (30° and 60°) and two on the left side (30° and 60°). A specific mechanical structure has been designed in order to fix the screens at specific distances and angles. USB-VGA converters and an external audio device (6 outputs) have been used for the management of multi-monitors signals. A seat has been purposely designed in order to adjust the height and the distance between the infant and the screens. Finally, the SmartEye system with six cameras running at 60 Hz has been chosen as Eye Tracking system.



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