

Video-Based Eye Tracking

Our Experience with Advanced Stimuli Design for Eye Tracking Software

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ABSTRACT: We present an independent, flexible, and easily programmable software program for generating a wide set of visual stimuli paradigms in eye-movement studies. The software, called ASTIDET (Advanced Stimuli Design for Eye Tracking), has been interfaced in real time with a high speed video-based eye tracking system in order to obtain a reliable measurement of saccades. Two saccadic paradigms have been tested (gap and memory guided tasks) in 10 normal subjects. The preliminary results confirm that ASTIDET is a user-friendly software and can be interfaced with a video-based eye-tracking device in order to obtain reliable measurement of saccades.

KEYWORDS: video-based eye tracking; saccades; analysis; software

PURPOSE

The aim of this study was to develop an independent, flexible, and easily programmable software program for generating visual stimuli for eye-movement studies.¹ We developed a software program called ASTIDET (Advanced Stimuli Design for Eye Tracking) as an easy-to-use program for stimulus generation, real-time data acquisition, and analysis in video-based eye-tracking applications.

PROGRAM DESCRIPTION

ASTIDET allows quick design of two-dimensional video sequences to be used as stimuli for a wide spectrum of eye-tracking paradigms. ASTIDET was developed in Visual C++ in order to benefit from its flexibility and also to allow possible future

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