EDA-BASED ESTIMATION OF VISUAL ATTENTION BY OBSERVATION OF EYE BLINK FREQUENCY

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Abstract- This paper describes the relationship between visual attention and eye blink frequency. In an experiment, we prompted the activation of a subject's visual attention and examined the influence of visual attention (as measured using electrodermal activity (EDA), which is meaningfully correlated with visual attention) on the subject's eye blink frequency. Experimental results show that engagement of visual attention decreased eye blink frequency and that when visual attention was not activated, eye blink frequency increased. Knowledge of this relationship provides a technique using EDA to objectively determining a subject's visual attention status.

Index terms*: Electrodermal activity (EDA), visual attention, eye blink, skin conductance response (SCR), index of physiological psychology, pre-cueing technique.