Eye Tracking in Geographic Contexts: Intent and Interaction

Andrew T. Duchowski
School of Computing, Clemson University, SC, USA
aduchow@g.clemson.edu

Keynote Talk

Abstract

Exploring eye tracking in the context of spatial information, a key consideration is gaze-based interaction. Geographic gaze-based recommender systems, for example, aim to provide an appropriate response to the user's gaze in geographic contexts, e.g., when looking at a particular location in physical or virtual space, on the screen or in 3D. Analysis of the viewer's gaze beyond fixation detection is required to infer the viewer's desire for information. Several approaches to developing an interest metric have been investigated. I will briefly review some advanced techniques for 3D gaze analysis, past interest metric efforts, and more recent developments of interaction styles.

Brief Biography

Dr. Duchowski is a professor of Computer Science at Clemson University. He received his baccalaureate (1990) from Simon Fraser University, Burnaby, Canada, and doctorate (1997) from Texas A&M University, College Station, TX, both in Computer Science. His research and teaching interests include visual attention and perception, eye tracking, computer vision, and computer graphics. He joined the School of Computing faculty at Clemson in January, 1998. He has since produced a corpus of publications and a textbook related to eye tracking research, and has delivered courses and seminars on the subject at international conferences. He directs Clemson's eye tracking laboratory, and teaches a regular course on eye tracking methodology attracting students from a variety of disciplines across campus.