
Facilitating Multiple Target Tracking using Semantic Depth of Field (SDOF)

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Abstract

Users of radar control systems and monitoring applications have to constantly extract essential information from dynamic scenes. In these environments a critical and elemental task consists of tracking multiple targets that are moving simultaneously. However, focusing on multiple moving targets is not trivial as it is very easy to lose continuity, particularly when the objects are situated within a very dense or cluttered background. While focus+context displays have been developed to improve users' ability to attend to important visual information, such techniques have not been applied to the visualization of moving objects. In this paper we evaluate the effectiveness of a focus+context technique, referred to as Semantic Depth of Field (SDOF), to the task of facilitating multiple target tracking. Results of our studies show an inclination for better performance with SDOF techniques, especially in low contrast scenarios.

Authors Keywords

Semantic depth of field, moving targets, visual displays, visualization, blurring, preattentive cues, target tracking.

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