Visually Directing User’s Attention in Interactive 3D Environments

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Using ELE to selectively direct user’s attention

ELE was integrated with Wildtangent (a publicly available web-based game engine) and tested in an interactive story called Mirage. This figure shows a screenshot from Mirage. In particular, it shows the use of ELE to focus on the characters: the user and Electra.

ELE was integrated in Unreal Tournament 2003. These three screenshots show the use of ELE in directing viewer’s attention to characters in a first person shooter.

This figure shows the use of ELE in an interactive story called Mirage. This screenshot shows the use of lighting to focus on the characters Electra as she unsheathes the sword.

Conclusion & Summary of Contributions

The paper introduces a new automatic lighting system that adapts the lighting in real-time within an interactive scene to direct participants’ attention to desired focus while satisfying other visual design goals, including providing necessary visibility, establishing depth, while maintaining visual continuity.