

Publication details

Information Visualisation Utilising 3D Computer Game Engines - Case Study: A Source Code Comprehension Tool (2005)

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Information Visualisation Utilising 3D Computer Game Engines - Case Study: A Source Code Comprehension Tool, Blazej Kot, Burkhard C. Wuensche, John Grundy, John Hosking, *Proceedings of the 6th Annual Conference of the ACM Special Interest Group on Computer-Human Interaction (CHINZ 2005)*, Auckland, New Zealand, 7-8 July 2005, pages 53-60.

Information visualisation applications have been facing everincreasing demands as the amount of available information has increased exponentially. With this, the number and complexity of visualisation tools for analysing and exploring data has also increased dramatically, making development and evolution of these systems difficult. We describe an investigation into reusing technology developed for computer games to create collaborative information visualisation tools. A framework for using game engines for information visualisation is presented together with an analysis of how the capabilities and constraints of a game engine influence the mapping of data into graphical representations and the interaction with it. Based on this research a source code comprehension tool was implemented using the Quake 3 computer game engine. It was found that game engines can be a good basis for an information visualisation tool, provided that the visualisations and interactions required meet certain criteria, mainly that the visualisation can be represented in terms of a limited number of discrete, interactive, and physical entities placed in a static 3-dimensional world of limited size.

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