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Research Article

Fractal Analysis of Stealthy Pathfinding Aesthetics

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Abstract

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Abstract

This paper uses a fractal model to analyze aesthetic values of a new class of obstacle-prone or " stealthy" pathfinding which seeks to avoid detection, exposure, openness, and so forth in videogames. This study is important since in general the artificial intelligence literature has given relatively little attention to aesthetic outcomes in pathfinding. The data we report, according to the fractal model, suggests that stealthy paths are statistically significantly unique in relative aesthetic value when compared to control paths. We show furthermore that paths generated with different stealth regimes are also statistically significantly unique. These conclusions are supported by statistical analysis of model results on experimental trials involving pathfinding in randomly generated, multiroom virtual worlds.