Title: Shadow mapping algorithms: applications and limitations

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Abstract: This study provides an overview of popular and famous algorithms and techniques in shadow maps generation.Well- known techniques in shadow maps generation is described detail, along with a discussion of the advantages and drawbacks of each. Basic ideas, improvements and future works of the techniques are also comprehensively summarized and analyzed in depth. Often, programmers have difficulty selecting an appropriate shadow generation algorithm that is specific to their purpose. We have classified and systemized these techniques. The main goal of this paper is to provide researchers with background on a variety of shadow mapping techniques so as make it easier for them to choose the method best suited to their aims. It is also hoped that our analysis will help researchers find solutions to the shortcomings of each technique.