ABSTRACT

Shader Tweaking Tool for Artist-Programmer Collaboration in Game Development

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Shader tweaking process is a polishing phase in game development. It becomes a real problem in terms of collaboration and time for artists and programmers. There are many tools related to shader authoring and tweaking activities, but they don't accommodate both roles to get optimized shaders' values. On every optimizing activity, the game source code has to be recompiled, and its compile time overhead consumes significant time compare to programmer and artist activity time. Traditionally, there are many such iterations before some optimized shader values are achieved.

The use of tool-based approach is to assist both artists and programmers improving the shader tweaking process. It reduces the number of iteration during polishing phase in game development and the amount of spent time. However, factors like shader knowledge and collaboration experience affect the use of the shader tweaking tool. The tool provides single iteration polishing phase and visual interface for the artists to tweak shader script's parameters. It also reduces time for thinking and tweaking process. Shader tweaking process time is reduced by 50.36% for people already familiar with the tool and by 43.42% for people with no experience. By storing the values of associated variables of shader in the collaboration tool, programmers can adjust the shader of game in a short time.

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