CG Animation for Piano Performance

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It is desirable in the field of animation and music education to develop a technique for piano performance animation using Computer Graphics. However, previous techniques for computer animation of piano performance have been mechanical and tended to lack the reality of fingering motions. This study is to develop techniques to reproduce the piano playing with fine motion by using detailed and natural-looking-computer graphics. In this paper, three studies have been described; ( ) measurement of piano fingering using motion capture technology, ( ) generation of a CG animation of fingering using offline/real-time rendering, and ( ) automatic generation of fingering using optimized algorithms. Finally examples in which the fingering data created in ( ) is used in TV animation "Nodame Cantabile", a Japanese comic book, has been introduced.