Magic-Beijing-Mirror: Facilitating Beijing Opera via a Real-Time Interactive Opera Making up System

Gao, Shirui (School: Beijing No. 2 Middle School)

Peking opera, named after the capital of China, Beijing, is the most influential form of musical theatre in China. Peking Opera is an important part of UNESCO's intangible cultural heritage list. However, with the acceleration of the pace of modern life, the audience and fans of Peking Opera are gradually decreasing. One of the major reasons is that the learning of Peking opera requires a high cost. Peking Opera actors need a delicate make-up and complicated costumes before they take the stage, also they need to sing and dance simultaneously and harmoniously. This project presents a complete set of interactive Peking Opera learning system—Peking Opera Magic Mirror. Users will interact with camera and screen to learn and complete a piece of Peking Opera. The system includes multiple modules such as a make-up rendering system, a costumes rendering system, and an opera selection and playback system. Experiments have shown that this system can perform real-time dressing up of characters' faces and costumes at low cost, making it easier for amateur users to learn and experience a piece of Peking opera. Practically, this system has shown a part of its appeal, inspiring people to learn and experience Peking Opera, and popularizing this traditional cultures.

Awards Won: