

Development of a 3D Hair Simulator to Support a Hairdresser's Haircut

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While getting a haircut at a hairdresser's, a customer may be unable to effectively communicate his or her hair-related needs. Additionally, the hairdresser often does not share an accurate final image of the customer's hairstyle even with the use of a hair catalog. Head shapes differ for each individual, which implies that the customer's head shape would be different from that of a catalog model. Often, the customer's expectations of the desired hairstyle and the practical results are different. If the final image of the customer's haircut is presented using a 3D hair simulator beforehand, it would facilitate the sharing of hair-related needs between the customer and the hairdresser, thereby improving customer satisfaction. In our previous study, we proposed a basic simulation method that took into consideration the head model generation method and the hairdresser's cutting technique. However, the study did not adequately consider the operability, such as the adjustment of hair in the simulator. Therefore, in this study, we developed a 3D hair simulator to provide support for hairdressers. In particular, we improved the interface for adjusting hair length and evaluated the operability improvement.

Keywords : 3D hair simulator, Hairdressers, Hairdresser's cutting technique