The Dexterous Hand of Sign Language

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The sign language dexterous hand is an integrate interaction system, which realizes the conversion between text, action and voice. The purpose of the study is facilitating the communication between ordinary people and deaf-mutes. The steps of the study are as follows. First, to find problems in life and stimulate research motivation. Second, to use existing theoretical knowledge to determine the improvement direction: mechanical structure to sign language dexterous hand. Third, to design the research scheme. Fourth, to improve the defects of the mechanical structure, such as wire rope to link mechanism. Fifth, to apply the existing public results. Such as LM gesture recognition sensor; Mobile phone voice recognition APP. Sixth, to design and develop the data processing system adopting the residual algorithm and mapping relations. Seventh, to rich sign language data base. In the experimental application, the project has a good effect on the expression of common sign language and semantics. The optimized structure can be used in the small volume and high precision structure in the future.

Awards Won:

Fourth Award of $500