

The benefits of using 3D CAD software to modify clothing virtual prototype

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Abstract:

Automated garment pattern making system has an important role in increasing development efficiency and achieving sustainable environment. In the traditional method, the operations must be repeated to prepare three-dimensional clothing samples several times, and this leads to an increase in time, effort, and costs. The problems of this research were: What is a clothing sample, what are the requirements for its implementation, and what are its types? How well does CLO 3D program perform the prototype sample efficiently? How can we combine the Gerber pattern program with the CLO 3D program to get the best garment sample? The significance of this research is keeping pace with the great technological growth in the applying the latest technologies in the field of advanced products, reducing wasted time, effort and money by using the traditional methods through the use of 3D technologies. This research aims to identify the garment sample, its requirements and types, achieve the maximum benefit from 2D program and 3D software to obtain garment virtual sample, and overcome any errors resulting from not adjusting the prototype sample using only CLO 3D software program. Research hypotheses are the possibility to combine between the Gerber pattern software with the CLO 3D program to get the best garment sample; the use of 2D - 3D software reduces the occurrence of costly errors before executing the garment. Two complex models were chosen for the experimental work. A Question form containing four basic axes was designed to investigate the assessment of the research factors and validate the hypotheses. The basic axes included 10 sub-inquiries spread in four axes to assess the achievement of the main axes. Results were statistically analyzed using the statistics Program (SPSS). The high evaluations of the basic axes prove the success of the questionnaire axes and execute the research hypotheses.

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