

## Utilizing of virtual simulation to fitting the industrial pattern, Prototyping section, in Garment Factories “Case Study”

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### **Abstract:**

3D technology is considered one of the Pattern digital technologies that help this technology to increase, ease and speed of completion of industrial processes. This study deals with how to take advantage of 3D technology in developing the performance of the samples department in the technical department of ready-to-wear factories, in order to solve the problems of the samples section associated with the implementation of the 2D Pattern, as this problem was concluded through field study and practical experiences in ready-to-wear factories in Egypt.

Controlling the fitting Pattern of clothes in the samples section faces many difficulties, the most important of which is the incompatibility of the industrial Pattern drawn with the human body "Pattern". Where defects appeared in the product after conducting and implementing the first sample, which required making adjustments to the industrial Pattern and re-executing the sample a second time until it became free from defects and ready to perform the grading according to the measurements and the "order" of the operation order required to be executed to start production processes, which results in it. In the presence of lost time to implement the sample, as well as wasted effort, and wastes in the raw materials used in the implementation of the sample (fabric/ accessories / threads / and direct and indirect costs) that will be quantified after that.

In order to find a solution to this problem, this research presents a case study using the "CLO5.1" program to improve the industrial Pattern in order to improve the quality of the male industrial Pattern drawing using 3D technology by making adjustments to some areas where the stress and stress ratios are high due to the lack of nan fitting of the Pattern. Industrial, which does not appear clearly even during implementation. The study concluded that the implementation of the CLO5.1 program in the sample section has succeeded in reducing the time wastage for sample production and the wastage of raw materials, thus reducing the cost of sample production

### **Key words:**

3Dtechnology , pattern , Prototyping ,Garment Factories ,virtual simulation