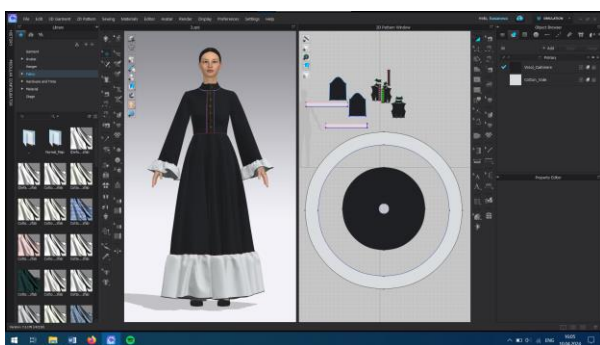


USING 3D TECHNOLOGIES IN FASHION INDUSTRY

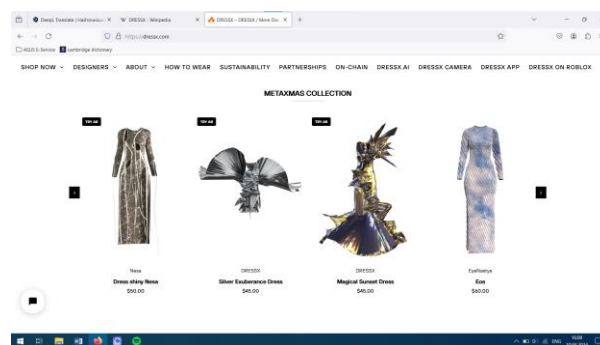
The purpose of this study is to analyze the advantages of using 3D technologies in modern garment production. In the course of the study, a 3D prototype of a historical dress was developed in the CLO3D software app (Pic.1).

3D modelling of clothes is the process of creating a three-dimensional prototype of clothes from 2D digital patterns. Today, there are many applications for creating 3D clothing models, namely CLO3D, Marvelous designer, Style3D, Tuka3D and others. The popularity of 3D fashion design began to grow a few years ago, but the pandemic has significantly accelerated this process by making it impossible to hold online shows. Live shows have been replaced by so-called «model-free shows».

The biggest advantage of creating 3D clothing visualisations is speed. By creating a three-dimensional model, a designer can check the product for all sizes without creating real prototypes, which take a lot of time. That is, we can save time on such stages as cutting, sewing and fitting the product on the model. If certain shortcomings in the fit of the product are identified using the "Stress map" (Pic.3), the designer can easily correct this in the field with 2D patterns and adjust the corresponding model to the size of the consumer.



Pic.1 Clo3D software interface

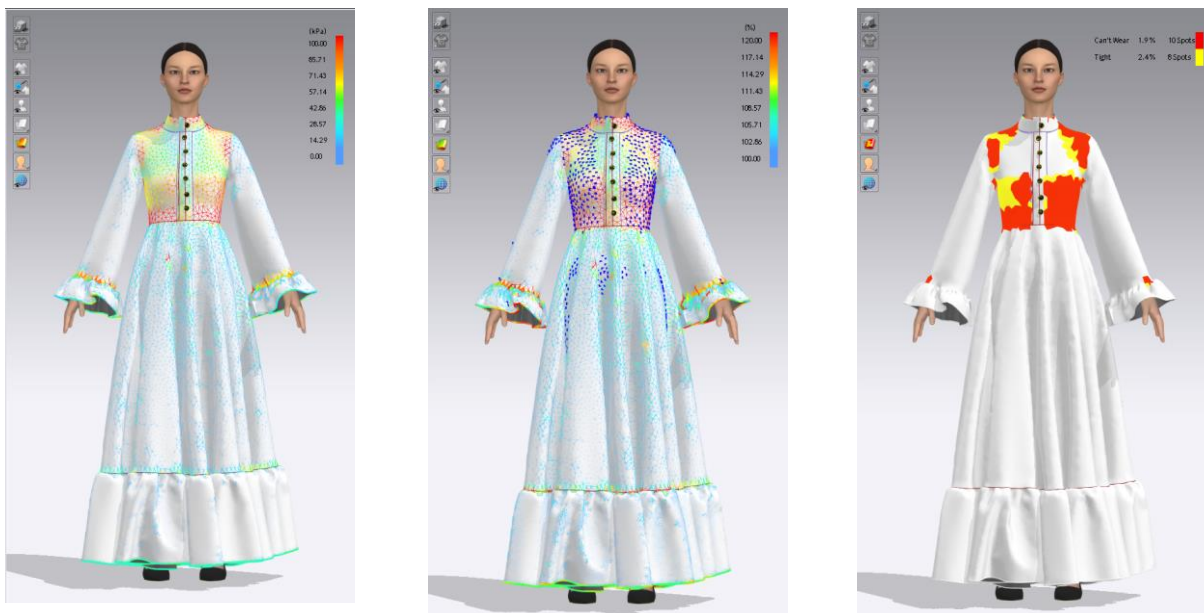


Pic.2 Platform DressX

The next advantage of 3D visualisation is environmental friendliness and smart consumption. Creating prototypes from fabric consumes a lot of resources, which pollutes our planet, increases CO2 emissions into the air and also leads to global warming on our planet. Therefore, the use of 3D significantly reduces the single-use of fabric for creating mock-ups. Another factor of environmental friendliness is the creation of so-called one-off images for a photo shoot, for example. With the help of 3D visualisation, you can "dress" any dress or suit for a creative photo without using real fabric, shoes and accessories. This is the principle behind the American company DressX.(Pic.2) This platform allows its users to "dress" in virtual clothes for photos and videos.

It is also a great opportunity for designers to see how the same garment will look in different colours and textures. In CLO3D, this can be done in two clicks, whereas

creating real products in different colours and using other types of fabrics requires a lot of time, money and materials. Also, with the help of 3D visualisation, you can easily select accessories, for example, the colour of buttons for a dress



Pic. 3 Using different types of «Stress Map»

There are also advantages for buyers in 3D visualisation. Some manufacturers have already begun to introduce virtual fitting rooms for their clothing stores, where consumers can use their phone's camera to try on clothes and see if they fit and choose the right size.

Summing up, we can clearly say that the use of 3D visualisation in the modern fashion business is quite widespread and popular, as well as a convenient tool for designers, business owners and customers alike.

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