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CONVERTIBLE PARTS OF YOUTH JACKETS BY TRANSFORMATION TECHNIQUES IN THE AUTOMATED SYSTEM

ПРЕОБРАЗОВАНИЕ ПРИЕМОВ ТРАНСФОРМИРУЕМЫХ ДЕТАЛЕЙ МОЛОДЕЖНОЙ КУРТКИ В АВТОМАТИЗИРОВАННОЙ СИСТЕМЕ

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The article investigates the techniques of transforming parts of youth clothing in the automated system and presents a competitive set of clothes that meet the requirements of a customer. The principles of transformation of convertible parts of youth jackets were analyzed and designed a set of clothes on a basic sample. As a result, convertible youth jacket in the automated system designed and the cost of preparation of models reduced, functional clothing possibilities expanded.

В статье исследованы приемы трансформации деталей молодежной одежды в автоматизированной системе и представлен конкурентоспособный комплект одежды, который отвечает потребительским требованиям. Проанализированы принципы преобразования трансформируемых деталей молодежной куртки, и на основе базового образца спроектирован комплект одежды. В результате спроектирована трансформируемая молодежная куртка в автоматизированной системе и сокращены затраты по подготовке модели, расширены функциональные возможности одежды.

Keywords: automated system, convertible parts, techniques of transformation, algorithm, automated design.

Ключевые слова: автоматизированная система, трансформируемые детали, приемы трансформации, алгоритм, автоматизированное проектирование.

On the basis of scientific and technical process conversion and transforming parts are widely used while designing of modern sewing. A set of multi- functional clothing is the achievement of intensive information and technical systems. Transforming components of clothing harmony designed on the basis of the automated system provides rational conversion to take advantage of youth clothing [1]. Techniques of transformation of the youth clothing items were analyzed in an automated system in this research work. Designing transformable youth jacket depends on the day - to - day needs to use more than one type of product. Here, using transforming parts of youth jacket is not only convenient, but also in terms of operational efficiency and economy of raw materials.

Algorithm is a clear and precise workflow that describes the process of converting an object from the initial to the final. A doer of algorithm can be either a person or a technical device. Various machines (computers, industrial robots, modern appliances) are formal doers of algorithms. A formal doer does not need to understand the essence of the problem, but it requires precise implementation of the command sequence [2].

The algorithm can be written in different ways (verbal description, a graphic description – flowchart, the program in one of the programming languages, etc.) Program is an algorithm written in a programming language. In HTML, algorithm of transformable parts of jackets designed and presented in the form of developed block diagram in Fig. 2.

The matrix is the most effective use in mathematical calculations in HTML program automated design of transformable parts of investigating youth jacket. To develop a variety of the transformable youth jacket, as the data transformation methods, the bottom of the jacket, as yoke, collar and sleeves chosen.

For example, data can be represented as a matrix F:

$$F = \begin{Vmatrix} f_{11} & f_{12} & f_{13} \ldots\ldots & f_{1l} \\ f_{21} & f_{22} & f_{23} \ldots\ldots & f_{21} \\ \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \\ f_{к1} & f_{к2} & f_{к3} \ldots\ldots & f_{кl} \end{Vmatrix}. \quad (1)$$

The way we consider that each line of the matrix elements can enter basic information [3]:

$$f_{ij} = f(x_{ij}),$$

where $i=\overline{1,k}$; $j=\overline{1,\ell}$, k – transforming parts, l – the number of transforming parts.

- The first line elements f1j select fabric for jackets:

$$f_{1j} = f(x_{1j}),\ j=\overline{1,\ell}. \quad (2)$$

- The second line elements f2j choose transformation techniques of parts, $\overline{1,\ell}$:

$$f_{2j} = f(x_{2j}), \quad (3)$$

where x_{21} – separation-connection; x_{22} – stretching-shrinkage; x_{23} – disappearance-appearance; x_{24} – changing by other details; x_{25} – combination-insertion.

- The third line elements f3j select bottom parts of the jacket:

$$f_{3j} = f(x_{3j}),\ j=(\overline{1,\ell}). \quad (4)$$

- The fourth line elements f4j select the necessary types of collars for jackets:

$$f_{4j} = f(x_{4j}),\ j=(\overline{1,\ell}). \quad (5)$$

- The fifth line elements f_{5j} select the necessary types of sleeves for jackets:

$$f_{5j} = f(x_{5j}),\ j=(\overline{1,\ell 1}). \quad (6)$$

- The sixth line elements f6j choose the necessary types of yoke for jackets:

$$f_{6j} = f(x_{6j}),\ j=(\overline{1,\ell}). \quad (7)$$

In HTML automated mode shown in Fig. 1, according to the youth jacket samples in transformation methods by choosing parts we set a comparative coefficient:

$$k_{ij} = \frac{f_{ij}}{\sum_{j=1}^{\ell} f_{ij}}. \quad (8)$$

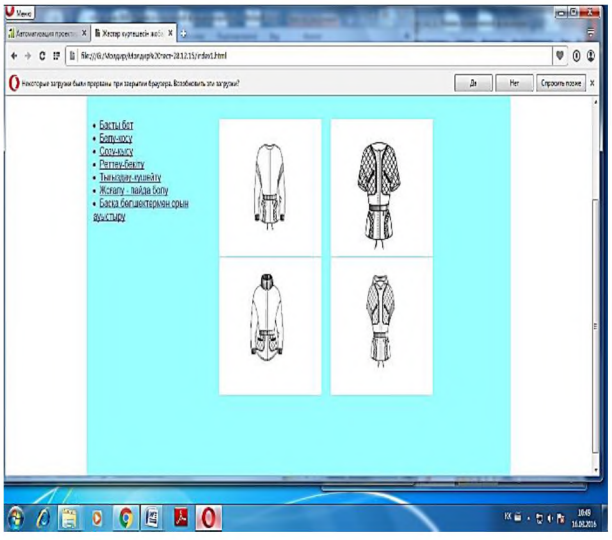

Fig. 1