

THE PRACTICAL SIGNIFICANCE OF CONSTRUCTING KEY DETAILS OF MEN'S JACKET DESIGN USING THE "ASSYST" PROGRAM

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Abstract: *The article provides general information about men's pajamas and discusses the "Assyst" software by Germany's "Assyst" GmbH (Aschheim-Dornach), an automated design system for the clothing, textile, and furniture manufacturing industries. It explains how the software is used to construct the basic details of men's pajamas and how the pattern layouts are manually and automatically arranged in the lay.assyst module.*

Key words: *men's jacket, Assyst, lay.assyst, jacket construction, detail pattern*

Annotatsiya: *Mazkur maqolada erkaklar pidjagi haqidagi umumiy ma'lumotlar, Germaniyaning "Assyst" GmbH (Aschheim-Dornach) dasturining tikuvchilik, to'qimachilik va mebel ishlab chiqarish sanoatlaridagi avtomatlashtirilgan loyihalash tizimi dasturiy ta'minoti, ushbu dasturda erkaklar pidjagi asosiy detallarini konstruksiyasini qurish va detallar andozalarini lay.assyst modulida qo'lda va avtomatik ravishda joylashmasini bajarish haqida ma'lumotlar keltirilgan.*

Kalit so'zlar: *erkaklar pidjagi, Assyst, lay.assyst, pidjak konstruksiyasi, detallar andozasi*

Аннотация: *В данной статье приведена общая информация о мужских пиджаках, а также о программном обеспечении автоматизированной системы проектирования "Assyst" GmbH (Ашайм-Дорнах, Германия) для швейной, текстильной и мебельной промышленности. В статье описывается, как в данной программе создается конструкция основных деталей мужского пиджака и как выполняется размещение шаблонов деталей в модуле lay.assyst вручную и автоматически.*

Ключевые слова: *Мужские пиджаки, Assyst, lay.assyst, конструкция пиджака, шаблон деталей.*

INTRODUCTION

The men's jacket is an integral part of modern clothing culture, and its design and construction are evolving in accordance with fashion trends, ergonomic requirements, and consumer needs. Today, in order to enhance competitiveness in the fashion industry and respond quickly to consumer demands, it is necessary to use advanced technologies. This article examines the process of developing the design of a men's jacket using the "Assyst" program. The "Assyst" program is advanced software designed for clothing design and construction, allowing designers to implement their ideas quickly and efficiently. Models

created with this program are not only aesthetically pleasing but also meet ergonomic requirements.

Methods

The German "Assyst" GmbH (Aschheim-Dornach) program specializes in producing ALT software for the sewing, furniture, and textile industries. The "Assyst" GmbH program can be successfully applied in small, medium, and large production enterprises. Currently, many leading sewing companies in Germany, as well as 30% of the largest European manufacturers in the sewing industry, use "Assyst" software. For example, popular brands such as "Adidas," "Max Mara," "Hugo Boss," "Nikatek," "Neckermann," "Rene Lezard," "Bogner," "s.Olive," "Escada," "BURDA," and "Muller und Sohn" use "Assyst" software.

The "Assyst" software consists of the following modules:

- Construction and modeling module (cad.assyst);
- Pattern grading module (cad.assyst);
- Pattern placement module (lay.assyst);
- Print control module (plot.entry);
- Data conversion module (data.conv);
- Pattern digitization module (digi.assyst).

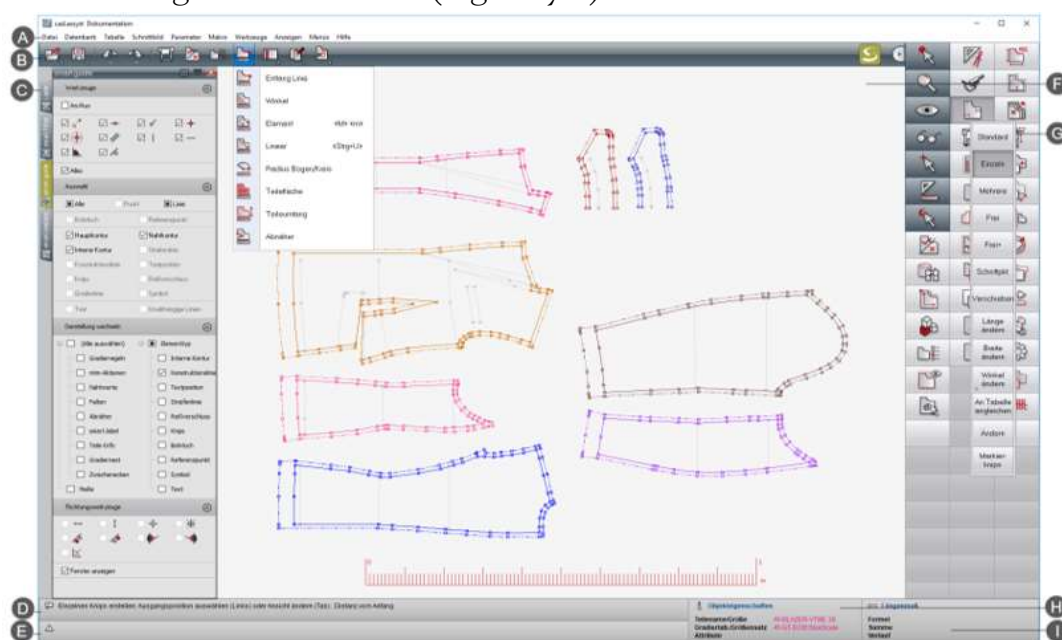


Figure 1. "Assyst" program interface.

a) Main menu, b) toolbar, c) dynamic frames, d) dialogue box, e) information line, f) workspac, g) menu area, h) object properties, i) measurement box

Pattern Placement Module (lay.assyst) This module is a convenient program that creates optimal pattern layouts considering material consumption and cutting waste. Its functions help to find the most optimal layout variant, reducing material waste. The module provides automatic placement functions and the ability to optimize prepared layouts, saving time and improving production efficiency. The module offers three working modes.

Manual mode. The user inputs all initial model data into the model passport and places patterns one by one on the screen using the cursor. The module automatically controls the gap distance between patterns, allowable deviations from the fabric grain

direction, and other parameters. During the layout process, the waste percentage is displayed on the screen, allowing the user to monitor the quality of their work. The module also offers parameters for striped or checkered fabrics to minimize waste and select the cutting method.

Automatic layout. The program automatically arranges patterns based on initial model data provided by the user. The user can make changes to the finished layout based on their skills.

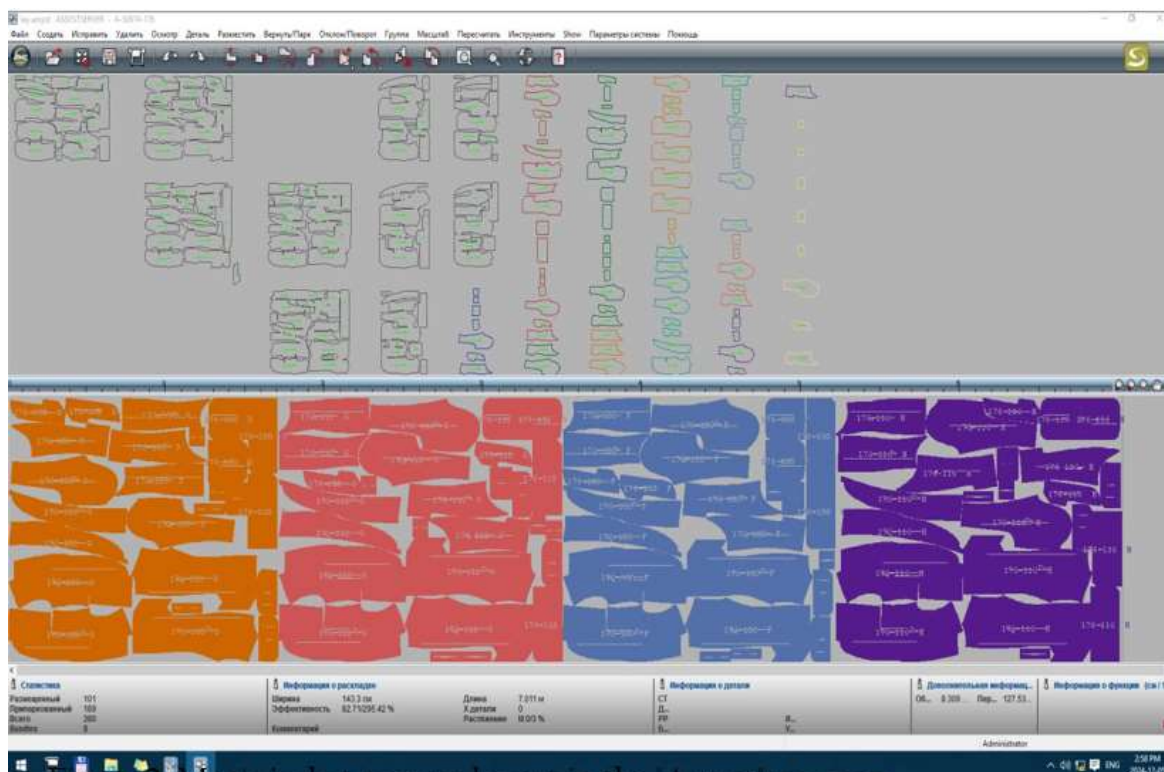


Figure 2. Men's jacket pattern layout in the "Assyst" program.

Discussion

In this study, the process of constructing a men's jacket using the "Assyst" program was examined in detail. The obtained results demonstrate the significance of this software in the modern fashion industry and how it helps designers.

The intuitive interface and extensive features of the "Assyst" program enable designers to implement their ideas quickly. This is crucial in a competitive market environment where quick responses to consumer demands are necessary. The 2D and 3D models created using the program allow designers to execute their work more efficiently, significantly accelerating the creative process.

Strict adherence to measurements and standards during the construction process improved the quality of the finished jacket. The selection of measurements and materials played a crucial role in ensuring comfort according to ergonomic requirements. The chosen polyester and cotton blend is not only aesthetically pleasing but also breathable, making it ideal for modern consumers who value both appearance and comfort.

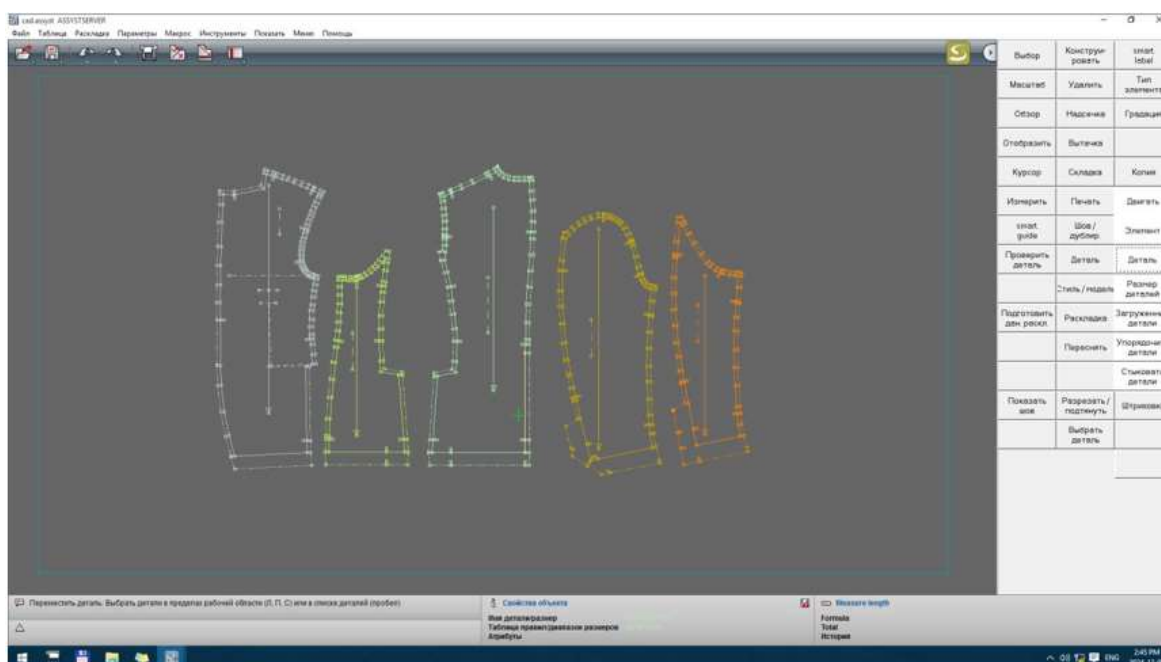


Figure 3. Patterns obtained from the constructed men's jacket in the "Assyst" program.

Since the model creation process is based on specified measurements using the program, the quality and comfort of the seams were rated highly. These results confirm the efficiency of the "Assyst" program and open possibilities for applying it to other types of clothing.

Moreover, the ease of developing women's and children's clothing using the "Assyst" program expands its application scope. Using this program to meet various fashion industry needs creates new opportunities for designers and enhances their creative processes.

Result

As a result, the process of constructing a men's jacket using the "Assyst" program not only improves design and construction quality but also helps create comfortable and aesthetically appealing clothing that meets modern fashion standards. The results of this study open new directions that can be expanded for other types of clothing and contribute to increasing competitiveness in the fashion industry.

Conclusion

In this study, the process of constructing a men's jacket using the "Assyst" program was examined in detail. The obtained results showed that the program not only ensures precise measurement input but also plays a key role in creating clothing designs. The accuracy of measurements and the user-friendly interface allowed users to work quickly and efficiently.

The jackets created met modern standards and were aesthetically pleasing, receiving high praise from users. Pilot trials conducted by customers demonstrated high satisfaction with the jackets' comfort, functionality, and design. This confirms the efficiency of the "Assyst" program and its usefulness for clothing manufacturers.

Furthermore, the experience gained in this study can be applied to the development of other types of clothing in the future. The capabilities of the "Assyst" program can be expanded and used to create new designs. For clothing manufacturers and designers, this

program not only saves time and reduces costs but also enables the production of quality products.

Overall, the men's jacket created using the "Assyst" program is considered a successful project both practically and aesthetically. This experience once again confirms the importance of using new technologies in clothing design and contributes to the development of innovative approaches in the fashion industry. By using this program, clothing manufacturers and designers can create quality products and achieve success in a competitive market environment.

REFERENCES:

1. Ergashev J.S, Monnopov J.I, Tadjibayeva N.M, Research of design of men's overwear in automated design systems, Scientific and Technical Journal of NamIET, Volume 3, 2021.
2. Ergashev J.S, Tadjibayeva N.M, "The analysis of knitted fabrics in the production of men's jacket." Innovative technologies in the sewing and knitting industry, issues in production, analysis, and development prospects, NamITI, Republican Scientific-Practical Conference Volume 1.2024
3. Ergashev J.S, Tadjibayeva N.M, Analysis of construction of key details of men's clothes in automated design systems; RESEARCH ARTICLE|JUNE 23 2023; [HTTPS://DOI.ORG/10.1063/5.0145810](https://doi.org/10.1063/5.0145810)
4. Turdiyev Maxmudjon, & Manzura Abdurakhimova. (2022). THE METHODS OF WELDING DETAILS OF SEWING ITEMS FROM THERMOPLASTIC MATERIALS. International Journal of Advance Scientific Research, 2(12), 125–132. <https://doi.org/10.37547/ijasr-02-12-18>
5. Ergashev J.S, Tadjibayeva N.M Analysis of Fiber Properties in Suit-Appropriate Knitted Fabrics. Prospects and main trends in modern science, International scientific-online conference. Part 16. 2024