Research on Intelligent Trend and Mode of Fashion Design Based on Interactive Mode

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Abstract: With the improvement of economic and cultural level and the development of fashion trend, consumers' requirements for clothing are becoming more and more diversified. However, the design mode of intelligent clothing in China has not formed a complete, scientific and systematic system, and is also restricted by age and class. After providing people with convenient and safe life, how to design intelligent clothing with more functions, more comprehensive and more perfect is the direction of future development. In the whole design process, reduce environmental pollution and increase recycling rate, so as to make smart clothing more environment-friendly. Using the organic combination of computer intelligence technology, graphics technology and professional knowledge of fashion design, this paper explores how to automatically generate styles on the basis of maintaining a certain fashion design style. At present, the research on its design mode is not mature, so it is necessary to make a typical case analysis of the research on intelligent garment design, to understand the design form and development trend in depth, and to make full use of various resources from the perspective of intelligent garment design development, embody the concept of intelligent design, actively summarize the relevant design content, intelligent clothing design for the future trend of intelligent research, and gradually face the majority of consumers, to achieve commercial popularization. This article will focus on the design requirements of intelligent clothing, technology, fabric, structure and other dimensions of intelligent clothing design methods, and analysis of its design mode.

1. Introduction

Today's clothing is not only a tool to hide shame and protect the body. Clothing is also a way of communication, which can reflect the identity, status and lifestyle of the wearer, and even some special culture [1]. Clothing is also an important clue to describe others. In order to meet the needs of the public and meet people's expectations for smart clothing, smart clothing designers should strive to improve their design level, develop smart clothing that can be widely accepted and loved by the public, and promote the high-quality and high-level development of smart clothing design in China and even the world. According to these characteristics, one is to use intelligent materials such as color changing materials and memory materials to realize intelligent clothing; Another kind of use of computer electronic technology such as: SCM technology, sensor technology, display technology, wireless communication technology used in intelligent clothing, to provide users with comfortable, convenient, intelligent clothing. Smart clothing needs to incorporate cutting edge technologies such as electronic information technology, sensor technology, textile science and materials science [2]. Using the organic combination of computer intelligence technology, graphics technology and professional knowledge of fashion design, this paper explores how to automatically generate fashion patterns on the basis of maintaining a certain fashion design style, which has not been reported at home and abroad, it's an innovative idea [3].

Intelligent fashion design is a new model in the field of design. Due to the novelty of its design concept, this type of fashion design is difficult. Intelligent fashion design is a new model in the field of design. Due to the novelty of its design concept, this type of fashion design is difficult. Smart clothing, as a research hotspot in academic circles in recent years, has become an important topic in

the field of wearable multimedia research. Especially with the development of sensing technology, electronic technology and material science, it provides technical support for the development of smart clothing [4]. However, with the improvement of cultural level, consumers' requirements for clothing are also increasing. In addition to the basic functional requirements, consumers have a more perceptual demand for clothing. Therefore, although there are many clothing brands and various styles in the market, consumers often feel that they do not have the clothes they want. The pattern of intelligent garment design includes intelligent garment pattern design, intelligent garment plate making, intelligent garment pattern design and intelligent conversion of plate making [5]. The pattern of intelligent garment design includes intelligent garment pattern design, intelligent garment plate making, intelligent garment pattern design and intelligent conversion of plate making. The introduction of artificial intelligence can reduce the over-reliance on human beings in design, improve the randomness of feeling and inspiration in design, and adapt to the requirements of fast rhythm and short cycle in custom design and production, to promote the overall technical level of the garment industry has a very important role.

2. Intelligent Fashion Design Mode

The design of intelligent clothing intelligent clothing is based on the needs of the public and design, including technology, fabric and shape. The design of intelligent clothing intelligent clothing is based on the needs of the public and design, including technology, fabric and shape. The development of technology in different fields provides various methods for the research of intelligent garment, but the research on the general pattern of intelligent garment design is still rare. Specifically speaking, the clothing design idea should be in the fashion element, the clothing material, the design front and so on synthesis understanding foundation, obtains the design inspiration and the thought, this article summarizes it as "Humanist" the design idea. One is to meet the user's own wearability needs, and to adjust the comfort of clothing from the aspects of clothing fit, breathability, moisture absorption, etc [6]. The other is to meet the user's operational needs, such as having the overall and detailed design of clothing related to a certain industry, facilitate the appropriate occasion, the main activities of the law of Operation; Third, meet the cultural needs of users, that is, they can abide by the relevant dress regulations from wearing, which does not affect the wearing needs of users for other clothes; Fourth, meet the aesthetic needs, and reflect the trend and other aesthetic characteristics from the color, style and style of clothing, so as to provide users with intelligent clothing that meets their needs. With the continuous maturity of intelligent clothing production technology, it can add a certain sense of fashion to intelligent clothing according to the needs of users.

Clothing modularization is based on the composability of clothing components. The basic idea is that clothing is divided into several modules, and then clothing modules are configured and connected according to consumer needs or design goals, the result of garment design is in accordance with the consumption demand or design goal. The structure design of intelligent clothing is also important. It should be practical and have a certain sense of fashion and beauty. It should be as low as possible, and at the same time, it can be easily modified locally, thus in the early stage of style design to provide the best support, but take into account the style of texture and other effects when it presents a lot of deficiencies. Technology is the driving force of smart clothing research, but at this time the smart clothing does not have good wearability, but is the carrier of the value of science and technology [7]. In the clothing design of polar exploration, underwear can add phase change materials to the fabrics to adjust body temperature and improve comfort; The outer coat can be designed with layered fabric, and the base material of the inner layer is skin friendly fabric with breathable, sweat guiding and quick drying; The middle layer is a thermal insulation layer, which can effectively reduce the loss of heat; In order to reduce the damage to the environment caused by the design, manufacturing and waste of intelligent clothing products, and recycle rare components and metal materials in electronic equipment as much as possible.

3. The Development Trend of Intelligent Clothing

At present, the design and research of intelligent clothing in China is still in its infancy, and there is a certain accumulation of technology. The research direction mainly focuses on materials and computer electronics. The research of intelligent clothing pays more attention to the development and application of intelligent modules, while less attention is paid to the comfort, beauty and convenience of clothing. The design of smart clothing needs technical support based on scientific and technological means. Although China is the largest developing country in the world, there are still some technical bottlenecks, which makes China's smart clothing technically limited. Therefore, there will be more research on human factors, consumer needs and interdisciplinary in the future, and their synergy will make smart clothing more commercialized and popular. As a personal health care doctor, he can detect the data of physical life characteristics and remind individuals of their physical health status from time to time[8]. The future design should consider the standard unification of the intelligent module, so as to realize the customization and difference of the clothing function, so as to better play the role of the intelligent clothing. Customization can help consumers keep their clothes for a longer period of time, which can solve the conflict between the long development time of smart clothes and the rapid change of fashion ideas.

In the future, smart clothing will form an intelligent system architecture with smart home system, big data system and blockchain system. As a personal high-quality assistant, it can provide entertainment activities such as music, film and television broadcasting. For the public, smart clothing is still a relatively new thing, and its use value and appreciation value are far higher than ordinary clothing. According to the idea of arrangement and combination, a variety of style features in the module will be combined into a large number of garment design results, which promotes the formation of garment product family. Unlike the traditional design discipline, which mainly focuses on form, interaction design focuses on content and connotation. Interaction design first aims to plan and describe the behavior of things, and then describe the most effective form to convey this behavior. In the single electronic technology test, the electronic technology stability of smart clothing is obtained by configuring the corresponding test module and analyzing the performance test results. In the real environment test, the alarm system that may be triggered is comprehensively evaluated by simulating various kinds of real use environment, such as skiing environment, sledge operation mode, etc. , the Future Research Direction should be more consumer demand and product performance, multi-disciplinary cross-study, break through the traditional manufacturing process, sales process, after-sales process; Form the characteristics of manufacturing automation, sales electronic network, maintenance-free, to provide reliable product protection for the mass market [9].

4. Design Means of Integration of Science and Technology and Clothing

Compared with smart clothing, the development of functional clothing is relatively mature. The survey results show that many scholars believe that we can learn from the design methods and modes of functional clothing to design intelligent clothing. Both belong to clothing with long life cycle, in which the development and testing of intelligent technology in intelligent clothing takes a long time. In order to realize user personalized retrieval and support browsing retrieval, all image information is hierarchically aggregated according to the standard classification principle. In the application of science and technology, the combination of these sensors and fabrics can also be connected with computers to meet the needs of information storage and interaction. The technical route of this paper is shown in Figure 1. Firstly, conduct basic research. On the basis of reading and analyzing relevant research at home and abroad, understand the knowledge and technology required in fashion interaction design and the existing research level. Secondly, this paper subdivides the types of clothing and divides the clothing styles into modules. In terms of economic value and social benefits, the advantages of intelligent clothing are far unmatched by ordinary clothing[10].

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│  Emotional needs│───────│   Perceptual demand acquisition  │
│ and characteristics│    └──────────────────────────────────┘
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└─────────────────┘       │ Emotional characteristics of clothing│
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│   of clothing   │───────│       Pattern matching           │
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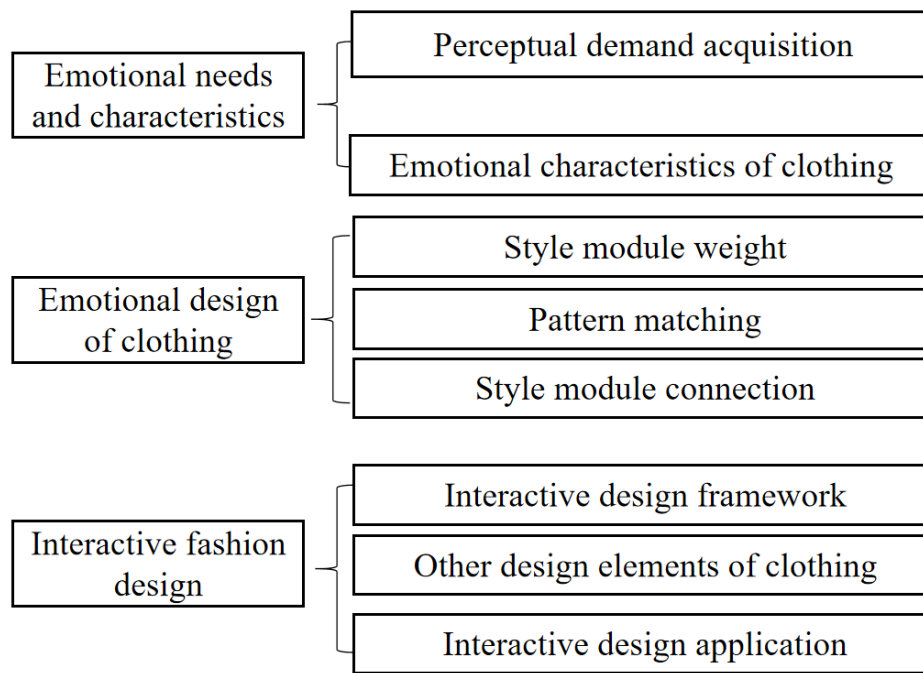
Fig.1 Research Technology Roadmap

The technical design of intelligent clothing is closely related to the types of intelligent clothing and the problems to be solved. At the same time, the research on intelligent clothing design mode will pay more attention to the development and evaluation of intelligent clothing, especially from the perspective of human needs and industry development, and promote the commercialization and popularization of intelligent clothing design by using interdisciplinary research. In terms of technology, smart clothing uses the most advanced technology in the world, can perceive the scene, and applies special sensors to smart clothing to provide users with the most accurate and appropriate services; In the implementation of the system, the integration of clothing knowledge into the interactive design system requires both clothing professional knowledge and algorithm support[11]. The clothing has been divided into modules above. However, the rapid development and change of clothing fashion requires the clothing modules to keep up with the trend in order to get a variety of clothing design results. The structure design of the existing intelligent clothing mostly depends on the existing clothing on the market, and it is not the innovative design of the structure design according to the user's demand to carry on the subtle change on the basis of the existing clothing. The research on the structure design of functional clothing can provide reference for the design of intelligent clothing, at the same time, because of the particularity of intelligent clothing, the configuration of its electronic component still need to be considered in the structural design.

5. Conclusions

Smart clothing is a common research hotspot in the field of electronic technology and textile and clothing. It has its own advantages, but it also brings application fear to the groups with limited technical level. The future life is not only a high-quality life, but also a high-tech life. The continuous improvement of human demand promotes the continuous maturity of intelligent clothing technology. Through the analysis of intelligent clothing design mode, it is hoped that more and more intelligent clothing will appear. Therefore, when designing intelligent clothing, we should give full play to innovative ideas and advanced ideas. According to the current development trend of intelligent clothing, The prospects for development are very promising. The design of intelligent clothing changes according to the change of the public demand. Therefore, in order to realize and ensure the practicability, fashion and timeliness of intelligent clothing, intelligent clothing designers need to fully understand the public's views on intelligent clothing and actual needs, fully consider

all kinds of hard conditions and influencing factors, dynamically optimize the design of intelligent clothing, and meet the needs of the public as much as possible, promoting the development of smart clothing.

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