A Study on the Development of a Web-based Simulation System for Value-Added Print Textile

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Rapidly changing information technologies such as internet and satellite broadcasting systems provide real time information on domestic and international fashion and textile design trends in real time. This development also changes customer need for design into the individual basis from the functional basis. As a result, the textile industry is required(requested) to analyze the current fashion trend and incorporate customer needs into product design as soon as possible. To mitigate this problem, the textile industry needs to develop a web-based digitalized design system which provide a variety of design samples in shorter(reduced) time and less expenses.

The purpose of this study is to develop a simulation system that fictitiously print textile design on textile. In particular, the system is developed to simulate the textile design and printing process through web. Unlike the current CAD textile design system, this system makes it possible to translate quickly the most up-to-date customer needs into new product development since it is easy to update the fashion and textile database through internet. An(One of the) advantages of this internet simulation system is to do detailed up-front planning and thus reduce the total time and expenses necessary to a new product.

The internet simulation system which is planned to develop in this study can be summarized as follows:

1. Visualization of textile(Textile visualization) and development of database (database construction) for textile design

In this stage, we first visualize textile materials based on textile fabrication methods, textile elements, texture, color, etc. in order to build the database for textile design. This approach allows us to search the database according to textile materials.

2. Visualization of textile design(Textile design visualization) and development of database(database construction) for textile design

In this stage, we classify extant textile design patterns based on characteristics of motive and style such as motive form, classical/contemporary style, etc. and visualize them to build(in) the database for the simulation system.

3. Development of the internet simulation system

In this stage, we develop a system that allows us to simulate textile design and printing process through internet. Since the database in this system is updated in real time, textile designers are able to simulate textile design in the most current mode and quickly translate it into a new product.

The development of the internet simulation system can makes it easier to experiment and simulate a variety of new design and style by utilization of multimedia, computer interaction, virtual reality, improvement of communication among functions participating the design and printing process, and understanding of new design trend via web, etc. More importantly, all of these contribute to developing higher quality products delivered in shorter periods to the market place with less expenses. Thus this system will be particularly useful to textile printing firms, textile pattern design firms, textile manufacturing firms, converting firms, textile material developing and promoting firms and will provide them a variety of new possibilities. In the future,(To make the system useful), the system must(will) be developed in a way to not only(not only to) use extant textile design database but also utilize designers' own style in the textile design process. It is also vital to update the database and necessary to study continuously in order to upgrade the simulation system. It is also necessary to upgrade the user interface for the user easy to design.