

## **Fashion Technology**

Developments in technology have allowed the fashion industry to expand to new and unique product lines. The most significant trend in the industry is the development of “smart fabrics” that leverage nanotechnology. Clothing is also increasingly multifunctional; for instance, companies have been working towards integrating cell phones, mp3 players and other devices commonly found in a handbag to slide into sleeves or jacket.

### **Employment Outlook**

Employment of fashion designers is projected to grow more slowly than average for all occupations through 2014. Much of this growth will originate from a growing population demanding more clothing, footwear, and accessories. A key factor in this trend is that the demand for affordable, yet stylish clothing is increasing. Taking this into consideration, the best employment opportunities will be seen in design firms that design mass market clothing sold in department stores and retail chain stores. Conversely, few employment opportunities are expected in design firms that cater to high-end department stores and specialty boutiques as demand for expensive, high-fashion design declines.

In 2004, fashion designers accounted for 17,000 jobs; a low turn over rate and high competition within the market make this job sector very competitive. More than one out of four fashion designers is self employed. About 25 percent of fashion designers worked for apparel and piece goods merchant wholesalers. Another 15 percent worked in cut and sew apparel manufacturing.

*(Source: Bureau of Labor Statistics)*

### **Trends & Emerging Issues**

#### Macro Trends:

- The next decades will see the gradual convergence of nanotechnology, biotechnology, information technology and cognitive technologies. Typical results will be materials with different tensile, thermal and optical properties, integration of IT into fabrics, and linkage of our bodies to the network for medical and communication purposes, via clothing or skin-wearables.
- Smart fabrics will expand the qualities and characteristics of clothing, for instance, anti-odor properties can be added to fabric.
- Globalization has led to outsourcing, particularly in the textile industry. Companies are increasingly managing global supply chains, making them sensitive to international politics and natural events, like weather patterns and disasters.

#### Market Trends:

- Clothing and retail companies are increasingly offering customized clothing and involving the customer in the design process. Customers can custom-design a pair of Nike ID sneakers; Land's End has an online program to allow users to create personalized clothing.
- Fashion designers are spreading into new “online” markets: several hundred clothing designers sell digital fashions for avatars in the virtual world Second Life.
- New fabrics are being developed to provide power generation using solar power, electromagnetic, thermal and mechanical means.

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- The range of electronic devices that can be built into clothes will increase. Storage technology is improving extremely quickly; massive amounts of storage will be available in very small volumes, so that people can take all their files, music and videos with them - integrated invisibly into small devices or clothes.

### **Forecasts**

- By 2015 washing and drying machines will have the ability to “read” chips planted within clothes to understand varying instructions.
- Clothing will be part of the ambient intelligent environment in the future.
- As online personas (such as avatars) become more universal, digital appearance will be as important as physical appearance, providing unique opportunities for fashion designers.

### **Resources**

#### *Articles & Reports:*

Bureau of Labor Statistics

[www.bls.gov](http://www.bls.gov)

European Technology Platform for the Future of Textiles and Clothing

<http://www.textile-platform.org/keydocuments.php>

Innovation Lab

<http://www.innovationlab.dk/sw17789.asp>