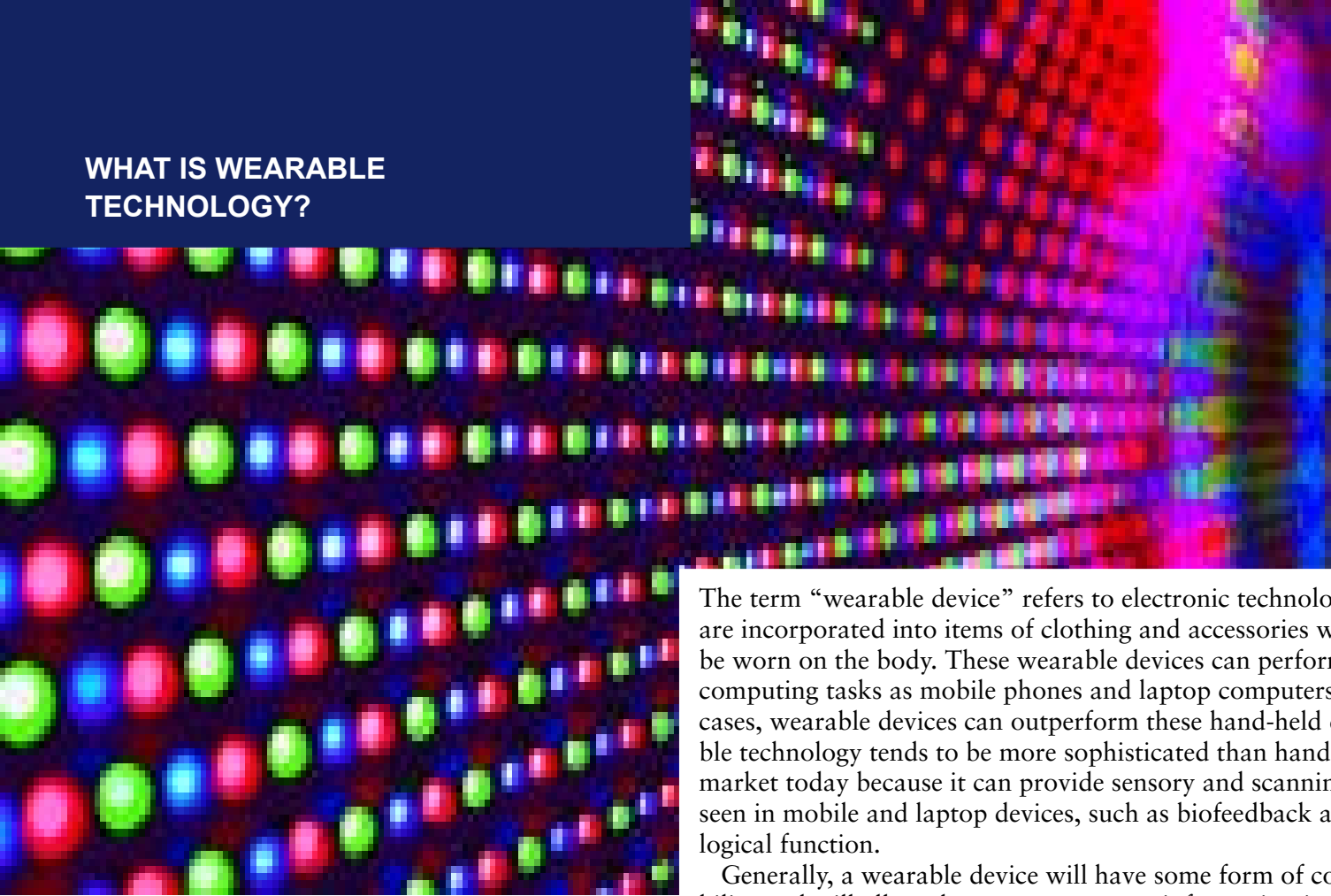




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**Wearable Technology**

## WHAT IS WEARABLE TECHNOLOGY?



The term “wearable device” refers to electronic technologies or computers that are incorporated into items of clothing and accessories which can comfortably be worn on the body. These wearable devices can perform many of the same computing tasks as mobile phones and laptop computers; however, in some cases, wearable devices can outperform these hand-held devices entirely. Wearable technology tends to be more sophisticated than hand-held technology on the market today because it can provide sensory and scanning features not typically seen in mobile and laptop devices, such as biofeedback and tracking of physiological function.

Generally, a wearable device will have some form of communications capability and will allow the wearer access to information in real time. Data-input capabilities are also a feature of such devices, as is local storage. Examples of wearable devices include watches, glasses, contact lenses, e-textiles and smart fabrics, headbands, beanies and caps, jewelry such as rings, bracelets, and hearing aid-like devices that are designed to look like earrings. Ultimately, whether a device is worn on or incorporated into the body, the purpose of wearable technology is to create constant, convenient, seamless, portable, and mostly hands-free access to electronics and computers.

The implications and uses of these devices are far reaching and can influence the fields of health and medicine, fitness, aging, disabilities, education, transportation, enterprise, finance, gaming and music. The goal of wearable technologies in each of these fields will be to smoothly incorporate functional, portable electronics and computers into individuals’ daily lives.

## WEARABLE TECHNOLOGY MARKET



“A perfect storm of innovation within low power wireless connectivity, sensor technology, big data, cloud services, voice user interfaces and mobile computing power is coming together and paves the way for connected wearable technology,” Johan Svanberg, senior analyst at Berg Insight, said in a statement. “The first generation of products appeal to specific markets and certain use cases, but refinement in design, technology and connectivity will broaden application areas and speed up market adoption.”

We’re at the dawn of a new industry loosely called “wearable technology” that may have reached \$4.6 billion in sales around the world already this year. And Google Glass isn’t even for sale yet. Many geeks already are on board. The April Modis Geek Pride Survey of people aged 18 or over found that “61 percent of self-described geeks said they would buy and wear a smart watch,” and “56 percent would do the same with smart glasses.” Perhaps even more interesting, 37 percent of non-geeks were also interested in smart watches, and 35 percent were interested in smart glasses.

The next wave of wearable devices expected to hit the market may be smart watches. ABI Research forecasts 1.2 million smart watches will be shipped in 2013 due to the wide availability and low cost of micro-electro-mechanical systems (MEMS), energy efficient connectivity technologies such as Bluetooth 4.0, and the high penetration of smartphones in many world markets, which supports a flourishing smart watch app ecosystem. While Apple struggles to bring its iWatch to market, Samsung has already begun to ship its Galaxy Gear smart watch, which includes a 1.9-megapixel camera and a speakerphone, comes in an array of colors, and shoots 720p HD video.

Sales of smart glasses, smart watches and wearable fitness trackers reached

## WEARABLE TECHNOLOGY \_FASHION\_



Don't Just Stand There

Some sharp people want to make our clothing to, well, do more.

Amy Winters, the designer of the Rainbow Winters clothing line, makes garments that respond to their environment.

For example, the dress is made with holographic leather and reacts to sound. As volume increases, it begins to illuminate and make what Winters describes as “visual music.” The bathing suit reacts to light, with the center panel turning into purple dots in the sun.

## Furniture Dress



Fashion designer Hussein Chalayan’s “Furniture Dress”. Chalayan is best known for his innovative designs which combine fashion and wearable technology. In this example an ordinary furniture transforms into a dress.

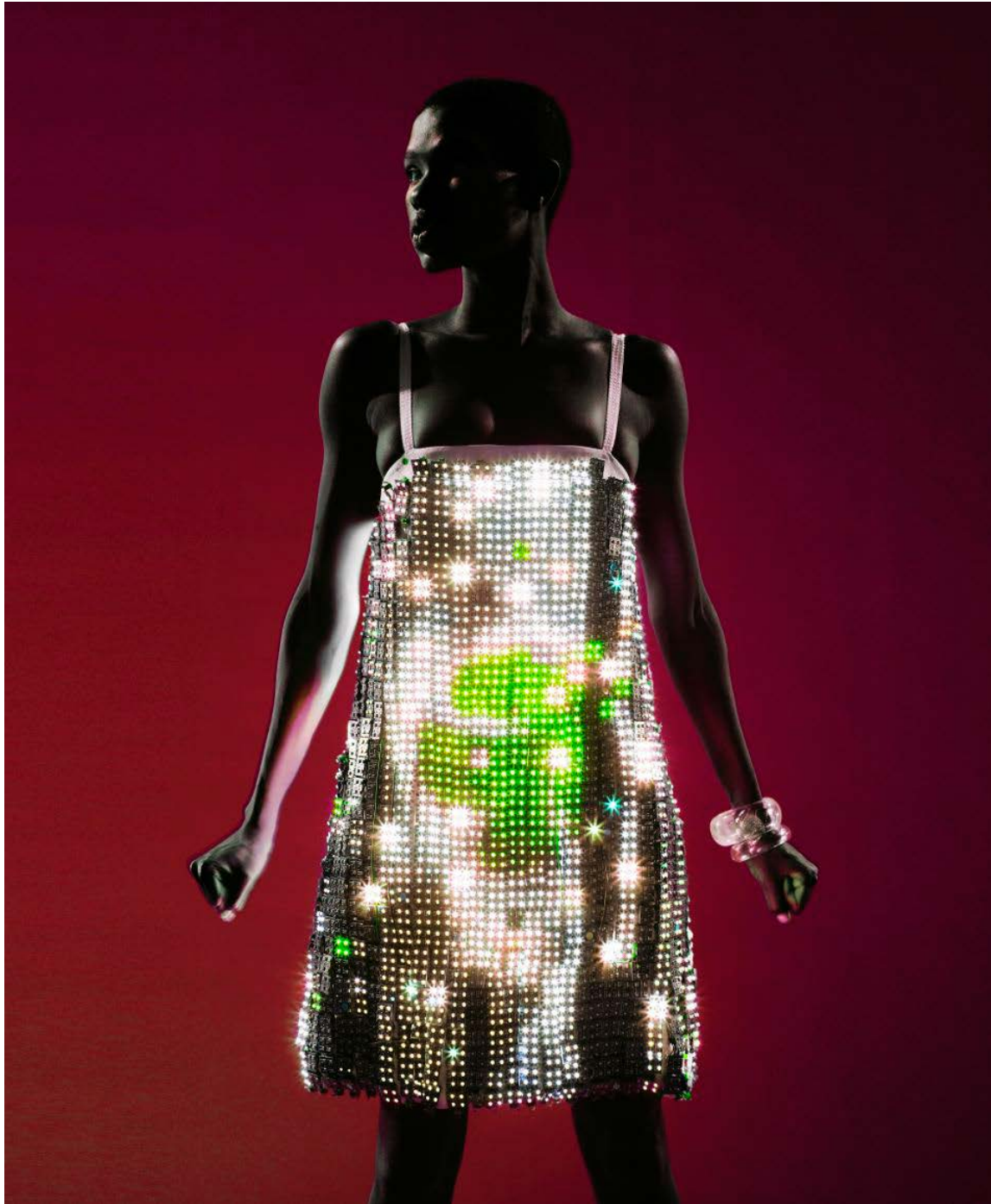
## Are You Lookin’ At Me?



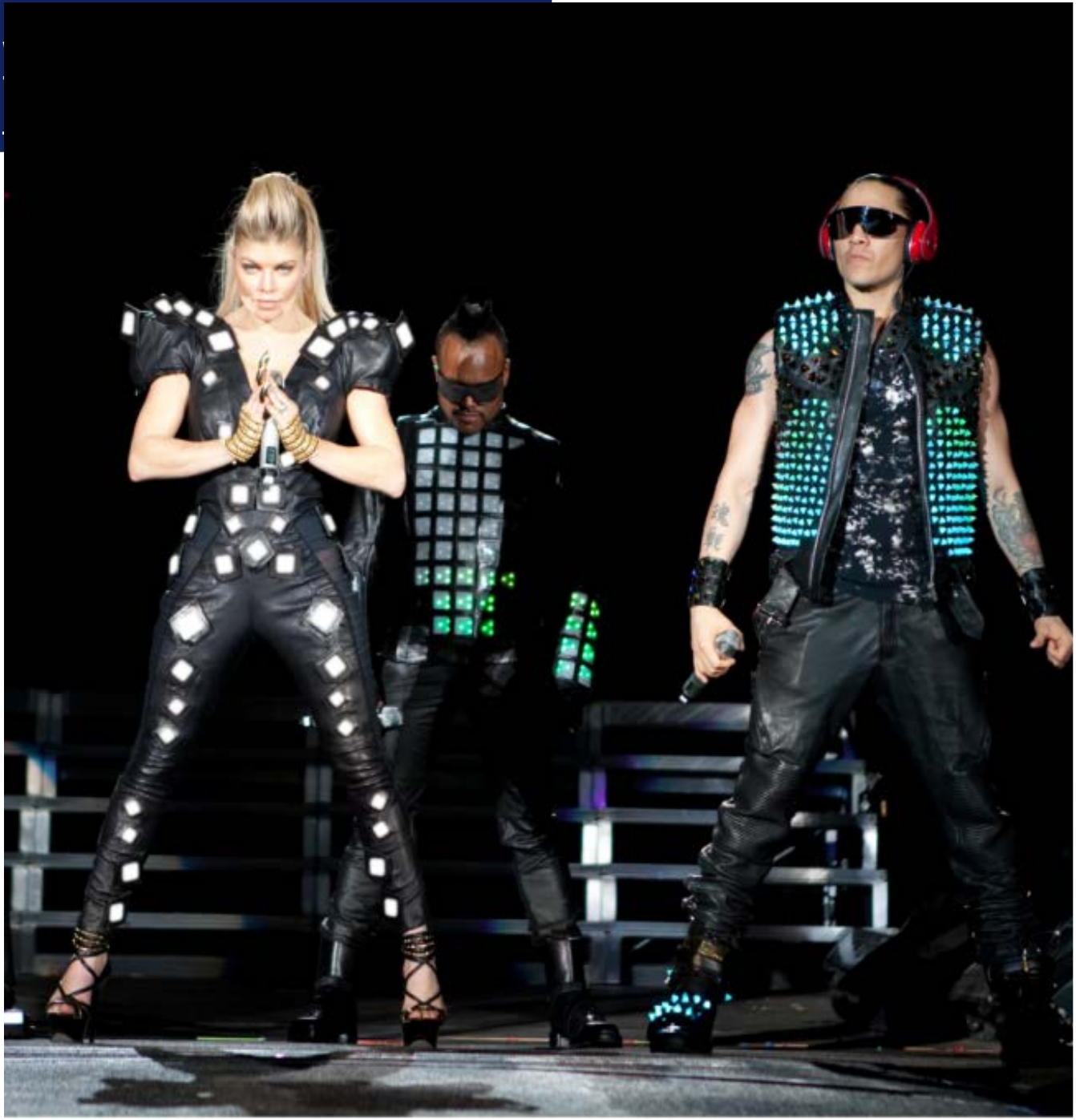
Using eye-tracking technology, fashion designer Ying Gao has created a set of dresses that move when someone is looking at them. When the garment is gazed at for a time, tiny motors move parts of it in patterns.



Hussein Chalayan  
**Transformer Dress**



Hussein Chalayan & Moritz Waldemeyer



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