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# Wearable tech: technology – and IP – get a fashion makeover

The emergence of wearable-tech products has given rise to a number of legal issues, particularly in relation to data protection and privacy, but also with regard to how innovative companies can protect and enforce their rights in products

Technology that consumers can wear emerged as one of the top trends at the Consumer Electronics Show (CES) held in Las Vegas in January 2014. So-called 'wearable tech' was also one of the buzzwords at February's Mobile World Congress (MWC) in Barcelona and was a hot topic of conversation at the Fashion Law Week recently held in the United States.

## What is wearable tech?

The term encompasses a wide range of products, from smartwatches, smartglasses and clothing to fitness bands which monitor heart rate and calories burned, and smart contact lenses which measure glucose levels in diabetics. Among the most talked-about wearable-tech products at the CES and MWC were the following:

- the Pebble Steel smartwatch, which allows wearers to receive notifications from their phone and access apps;
- the Neptune Pine smartwatch, which is essentially a smartphone mounted on a watch;
- the Sony Core – a small chip which is designed to slot into a number of accessories, including the Sony SmartBand, and which links to the Sony Lifelog app, a fitness tracker that logs individuals' exercise routines, as well as other information, such as locations they have visited, the music they listen to and the books they read; and
- the Netatmo June – a bracelet which provides the wearer with details about sun exposure and suggested protection.

Other examples of wearables which are currently available or soon to come to market include:

- Fitbit Flex – a band which tracks steps taken, distance travelled and calories burned, as well as sleep quality;
- the Nike+ Fuelband, which tracks the wearer's activity levels and links to an app which provides insights into how to optimise movement;
- the Sony SmartWatch, which features apps as well as call and message notifications; and

- Google Glass, which, among other things, allows wearers to record photos and videos and project information from the Internet onto a small display on the right-hand lens of the glasses. Google Glass is currently being trialled by a small number of individuals in the United States, known as 'explorers'.

A recent Credit Suisse report estimates that the market for wearable technology is currently worth between \$3 billion and \$5 billion and, while it is still early days in terms of consumer uptake, is expected to rise to between \$30 billion and \$50 billion over the next three to five years.

## Is wearable tech a new trend?

Technology which can be worn is not, strictly speaking, a new phenomenon. Some early examples of wearable tech include wristwatches in their most basic form, which became popular in the late 19th century, and headlamps (or cap lamps) which were introduced for use by miners at the beginning of the 20th century. More recent examples of wearable tech include calculator watches, which were prevalent in the 1970s and 1980s.

Wearable tech has also captured the imagination of popular culture for over 50 years and futuristic visions of wearable-tech products have featured in a number of films and television series. For example, the comic strip detective Dick Tracy was seen speaking into a two-way wrist radio in the 1940s and numerous James Bond films have featured examples of wearable tech: magnetic watches with miniature saws (*Live and Let Die* (1973)), cameras concealed within rings (*A View to a Kill* (1985)), watches with the ability to emit infrared lasers (*Goldeneye* (1995)) and X-ray glasses (*The World is Not Enough* (1999)). The concept of wearable tech recently featured prominently on UK television screens during the final episode of Series 3 of the BBC's *Sherlock Holmes* adaptation ("His Last Vow", broadcast in January 2014), during which it initially appeared that Sherlock's nemesis was accessing information about various individuals from a data vault via a pair of smartglasses; although it ultimately transpired that this information had in fact been retrieved from basic human memory.

What is undoubtedly new, however, is the ability of such wearables to interact with other technology, such as smartphones and apps, as well as social media including Facebook, Twitter and Instagram, to enable wearers to upload and share data instantly. This is giving rise to some of the biggest legal issues surrounding wearable-tech products. It already seems clear that the law will need to adapt and evolve to keep pace with technological evolution

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in this area. There are also real opportunities (and threats) to be considered by the developers of such products in terms of protecting and exploiting often extremely innovative concepts (with regard to both their technology and design). This article focuses on some of the key legal issues from an IP perspective.

### Protecting IP aspects of wearable-tech products

As demonstrated at the CES and MWC, technology companies have invested millions in the development of wearable-tech products, and it is imperative that such companies ensure that adequate and appropriate IP protection is in place to safeguard this investment.

Wearable-tech products, such as smartwatches, are likely to give rise to a raft of potential IP rights and it is important that technology companies adopt a holistic approach towards protection. Consideration might be given, for example, to:

- registering the name of the smartwatch as a trademark;
- seeking to protect the design of the watch by registering it (if sufficiently novel); and
- securing a patent in relation to certain elements of the smartwatch.

Some of the basic IP rights which may subsist in wearable-tech products are discussed in greater detail below.

### Trademarks

The broad spectrum of functions performed by wearable-tech products – for example, Google Glass incorporates a computer and camera, among other things – will require trademark professionals to be creative when drafting trademark specifications, to ensure that all features of the particular product are protected. This may include features which relate to both fashion and function. Interestingly, at present, the GOOGLE GLASS mark does not appear to be registered in respect of eye glasses or spectacles in Class 9 within the European Union.

Trademark classification terms will also need to evolve as the functionality of wearable-tech products continues to expand and increase. At present, ‘wearable computer peripherals’ is an accepted classification term at both the Office for Harmonisation in the Internal Market (OHIM) and the US Patent and Trademark Office (USPTO). On the other hand, ‘smartwatches’ is an accepted classification term at the USPTO, but not yet at OHIM or the UK IP Office. Similarly, the term ‘smartglasses’ does not yet appear to be an accepted term for classification purposes at the USPTO, OHIM or the UK IP Office. Nevertheless, as wearable tech becomes more prevalent, we can expect national registries to adapt and expand their classification policies accordingly.

### Registered designs

In the European Union, Community registered designs represent a cheap and efficient way of obtaining protection for novel designs and it will be important for technology companies to assess product ranges continually in order to determine whether protection should be sought for particular design embodiments of each product. Technology companies may also wish to take advantage of provisions which allow for the deferred publication of designs in certain instances, enabling the owner to keep the design itself confidential for a number of months following the filing of an application.

### Patents

The ability to obtain a patent for the software or computer program element of a wearable-tech product is likely to depend on the jurisdiction, as it may be easier to obtain such patents in, for instance, the United States as opposed to the European Union.



Google Glass, which incorporates a computer and camera, among other things

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If a particular aspect of a wearable-tech product is potentially patentable, then it will be important for tech companies to ensure that appropriate safeguards are put in place to maintain confidentiality until such a patent has been applied for.

### Potential legal issues resulting from increased use of wearable-tech products

The expansion of wearable-tech products into the mainstream poses a number of legal issues both for the technology company which is creating the wearable and for the consumer or end user of the product. Crucially, the question of who would be responsible for any legal infractions is likely to be open to debate, and the answer may be different depending on a variety of factors – not least of which would be the context of use and, of course, jurisdiction.

### Personal data

A key legal issue from the perspective of the technology company is likely to be data protection. Most wearables (including those discussed in the introduction above) have the ability to capture and process huge amounts of personal data about the wearer. Such data may then be processed and stored by the technology company. For example, wearable tech aimed at the health and fitness market may capture data relating to the wearer's GPS location and heart rate, as well as the number of calories burned on a particular day. Other potentially confidential information (eg, data from an individual's health records or medical history) may also be relevant and conceivably recorded and/or stored on such devices. Accordingly, technology companies

need to ensure that they have adequate procedures and safeguards in place to ensure compliance with relevant data protection laws, both in relation to the point at which the data is captured and in relation to what happens to the data once it has been collected. This may require the technology company to provide the wearer with information about the nature of the data which has been captured and how it will be used, shared and transferred, in order to obtain informed consent from wearers regarding the processing of such information and to ensure that adequate security provisions are in place to protect such data once captured.

A number of apps (eg, in the fitness sphere) are already available for smartphones and other devices, which can be used to collect personal data about an individual. However, the advent of wearable tech will hugely increase the range, amount and type of personal data which is captured, as well as the ease with which this data can potentially be shared (both intentionally and inadvertently). Similar data protection concerns have also been voiced by many commentators in discussions over the so-called 'internet of things', a phrase which is used to refer, very broadly, to a scenario where objects containing embedded technology interact, without the need for human intervention.

#### Counterfeit products

As wearable tech becomes more prevalent, it is inevitable that counterfeit versions of leading products will appear on the market. The ability of counterfeiters to produce knock-off versions of the most popular wearable tech will be greatly assisted by the increased availability of 3D printers, which allow the design of a product to be reverse engineered and reconstructed quickly and easily. 3D printers have been available in one form or another for some time, but are now becoming increasingly economical to purchase and were, ironically, another key product exhibited at the CES earlier this year. Although counterfeiters may find it difficult to replicate technology of such complex products, the ease with which software can be hacked, copied and distributed at the click of a button means that technology companies must ensure that adequate measures are put in place to address the issue of counterfeit products at every level of the supply chain, from manufacture to distribution.

#### Privacy

Wearable-tech products also raise a number of potential legal issues in relation to the privacy of third parties (which may have an effect on consumers and how they may use such products). This is because certain wearables, such as Google Glass, have the potential to capture individuals who are in the vicinity of the wearer on video and audio, and such footage could then be instantly uploaded by the wearer and shared on social media sites and other websites. Again, such actions are already possible on smartphones, but are likely to occur on a much greater scale following the emergence of wearable tech. Indeed, there are certain practical differences between an individual holding up a smartphone and overtly filming a third party, and that same individual filming a third party via Google Glass, where the fact that image/audio recording is taking place is imperceptible to anyone but the wearer.

It seems that this distinction has not been lost on the general public. The US press has recently reported instances of public backlash against Google Glass explorers, with one female explorer being verbally and physically assaulted in a bar, and a male explorer being asked to leave a coffee shop. Both individuals were wearing the product, and both customers and employees reportedly felt uncomfortable that they were being recorded. This has led to some cafes in the US banning the device before it has even been released

to the general public. No doubt Google, which has recently issued guidance to individuals currently trialling the product (including how to avoid being a 'glasshole', a term actually used by Google in its guidelines), will be hoping that such a backlash is simply the result of a current lack of awareness among the public over how the Google Glass product operates.

#### Copyright and patent infringement

It was recently reported that a Google Glass explorer was evicted from a cinema in the United States, suspected of trying to record a film using the product. The man was ultimately released after an hour of questioning, but only after he had allowed his smartglasses to be inspected to ensure that nothing had been recorded. One could certainly imagine situations where the taking of photographs and/or the recording of video and subsequent sharing of this content online (often through live streaming) would result in infringement of third-party IP rights. We are also likely to see a raft of more traditional infringement actions relating to IP aspects of wearable technology. For example, Adidas has just launched proceedings in the United States against the companies Under Armour and MapMyFitness, alleging infringement of various patents relating to devices for fitness training and tracking.

Of course, it is not just IP law which will need to adapt and develop to keep pace with wearable technology in the future. Will it, for example, be permissible to drive while wearing Google Glass? This issue arose recently in the United States, but the case against the driver was dismissed, as it could not be proved beyond reasonable doubt that the Google Glass device was actually in use while the individual was driving. The fact that it is extremely hard for third parties to ascertain whether Google Glass is being used is likely to create plenty more evidentiary issues of this kind in future.

#### Function versus fashion

While to many commentators the rise of wearable tech is inevitable and it is simply a question of when, not whether, wearables become mainstream, there are those who consider that the concept as a whole may not take off. This view is supported by a recent survey conducted by Accenture, which suggests that two-thirds of Britons, among other concerns, have no interest in owning a wearable-tech product.

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Such views may be based on observations from some consumers that certain wearable tech designs are ugly, masculine and, frankly, not fashionable enough. It is notable that one of the most talked-about wearables at the CES was the Pebble Steel smartwatch, which many commentators note includes much the same functionality as the original Pebble smartwatch (released in 2013), but now features a more fashionable and sleeker appearance. It seems that technology companies themselves are aware of the need to design attractive wearables, which are likely to become the next must-have accessory. When one considers the evolution in terms of the physical design of products such as tablet computers and smartphones (and how these have reduced in size and become more elegantly designed as technology has advanced), it is surely only a matter of time before the wearables market sees similar developments.

The CES also saw the announcement of a collaboration between Intel and the Council of Fashion Designers of America to create a community for technology developers and fashion designers based around wearable technology. We are likely to see further collaborations, joint ventures and/or licensing arrangements between technology and fashion companies, as such entities seek to maximise sales of wearable-tech products by combining top brand names from both industries in a manner that is in itself innovative.

## **Conclusion**

The emergence of wearable-tech products has given rise to a number of legal issues, particularly in relation to data protection and privacy,

but also with regard to how innovative companies can protect and enforce their rights in products which in many cases are revolutionary.

While the rise of wearable tech seems inevitable, in a recent survey conducted by Rackspace, 51% of respondents in the United Kingdom and the United States cited privacy concerns as a barrier to the adoption of wearable technology. While a number of these issues have existed since the invention of smartphones, the scale of the problem is likely to increase rapidly as the popularity and range of wearable-tech products on the market grow. It remains to be seen to what extent technology companies can allay consumers' fears in this regard. [WTR](#)

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