**Blurred Lines – How Will “Wearable Technology” Affect**

**the Market and Change IP Laws**

**Introduction**

Wearable Technology is a fast growing trend as the ability to connect with our electronic devices are being explored in new and innovative ways, however protecting that right with regards to patentability, copyrights, and trademarks causes the legal waters to become murky. The market for wearable technology is set to grow from $1.6 billion to $5 billion, according to research by Gartner. With such a fast growing sector of the technology field, the legal issues are sure to follow. Considering the inherent similarity and their converged uses, it is likely that wearable tech’s IP issues will mirror issues initially had by both the mobile and semiconductor sectors.

Contrary to popular belief, the technology on which even the most basic wearable technology is based on, e.g. miniature pressure sensors, has been around since the early 1990’s, slowly collecting data in an increasingly efficient and accurate manner. As the ability to mine data has become quicker and the collective skill in software became advanced enough to comprehend and utilize the amassed data, the recent surge in wearable technology inventions, such as the Fitbit, Google Glass, and Apple’s iWatch, can be tracked. However, as useful as many of these products can be, as their uses become more prevalent and widespread many legal implications and issues will arise, which may only be further confused as the increased use of wearable technology becomes synonymous with the human body, for instance as assistive devices for people with disabilities.

 Some recent examples of the rising influence of wearable technology are the big-name acquisitions of Virtual Reality (VR) start-ups by Facebook and Google that have started a shift back to hardware. Facebook bought out Oculus Rift for $2 billion while Google, very recently, bought a separate VR startup named Magic Leap for $500 million. With two of the biggest names in the tech world investing in VR, wearable technology is brought to the fore-front of technological innovation.

**What is “Wearable Technology”?**

 One of the first issues with “wearable technology” is the wide range of products and applications that the name covers. The following is an example table of some of the applications of wearable technology and many of the associated product categories within the applications (**bolded** for emphasis):

|  |  |
| --- | --- |
| **Applications** | **Product Categories** |
| Healthcare and Medical**Fitness and Wellness****Entertainment/Infotainment**IndustrialMilitary | **Activity Monitors**Audio EarbudsBluetooth HeadsetsDrug Delivery ProductsEmotional MeasurementHand-worn TerminalsImaging ProductsSleep SensorsSmart Clothing**Smart Glasses****Smart Watches** |

Smart Glasses

Smart Glasses are designed to augment reality in real-time and provide information to you about your surroundings instantly via increasingly seamless communications. An example of this could be Smart Glasses providing you with the names of people you meet by matching pictures from your Facebook friends with their real-life counterpart. An IP issue that could quickly arise is the ownership and use of that data, for instance who actually owns the photo (e.g. is it Facebook? The user who uploaded it? The Smart Glass user themselves who now has a copy of their friend’s photo saved on their local disk drive?).

Smart Watches

[Small Description of Smart Watches]

Chip Makers

 Computer chips have become smaller and more powerful over the years and in doing so the cost to produce and sell chips have become much cheaper. With the advent of easily obtainable chips, it will be possible for even individual’s to purchase computer chips and design their own wearable technology.

**Preliminary Forecast of Economic Viability**

 The past history of wearable technology is more or less localized to hearing aids, low-tech performance monitors, and headsets, lending itself to a relatively open market for future wearable tech starting with products related to social and entertainment (e.g. Smart Glasses/Watches), the potential success being followed up by products related to health and fitness (e.g. Smart Clothing and Activity Monitors). Thus, the future for wearable technology is huge as the market is wide open with many predictions that the wearable market could rise to $19 billion after a $1.4 billion showing in 2013. Much of this is attributed to the increased awareness of the average consumer to wearable technology and as more products are put out on the market, a trend similar to the adoption of cell-phones is likely to arise.

**Evolution of Patent Laws**

Because of the relatively new field of wearable technology, the lack of a significant amount of products out in the world has, logically, not led to a large amount of litigation, however that is not to say that litigation isn’t coming.

One of the looming issues regarding wearable technology patents are how broad the patent’s claims may be. For instance, with regards to the fitness tracking apps, there will only be so many ways to track movement. In what may be one of the first patent litigation cases involving wearable technology, Adidas has sued Under Armour (UA) alleging that UA ‘s exercise tracking and fitness products infringe patents that Adidas holds themselves, namely UA’s patents that are associated with the MapMyFitness application. This case also has the added caveat of a prior employee transfer as UA’s current director of research was previously a senior engineering manager at Adidas with direct knowledge of Adidas’ patent portfolio. In any case, it seems very likely that it was UA’s combining of their performance tracking products with the MapMyFitness application bringing GPS and other advanced metrics into method to track performance that led Adidas to sue for infringement. The holding of this case could be especially important in that it will help define the protective scope of patentability of wearable tech..

The Supreme Court also recently handed down a verdict in a patent infringement case, Nautilus Inc. v. Biosig Instruments Inc., with very broad implications that may have the ability to deter future similar lawsuits. In Nautilus, the traditional view of indefiniteness was severely questioned and put to the test. Surprisingly, the Supreme Court’s ruling on the issue of indefiniteness led away from the traditional view that indefiniteness is more a question of law and pushed indefiniteness into a fact-reliant territory. The issue at hand was whether Nautilus had violated a Biosig held patent for a heart-rate monitor. In a unanimous decision, the Supreme Court reversed a lower court’s decision citing a lack of precision and clarity used to determine Biosig’s patent’s validity further saying that the ambiguity used would “leave courts and the patent bar at sea without a reliable compass.” The Supreme Court’s ruling goes against the traditional view of indefiniteness, but it is clear that there was a purpose in sending the case back to the lower court’s. Considering the future impact of wearable technology, forcing the lower court to reconsider the case using a more precise standard could potentially protect many companies from aggressive patent trolls while also adjusting the bar for patent admissibility as needed depending on the scope of wearable tech. Traditionally, courts have viewed indefiniteness as part of the claim construction purview, however after the ruling of Nautilus, indefiniteness now has the capability of being transported as a question for trial.

Another issue is the blurred line of how to categorize wearable technology as it becomes relied on more and more as an assistive technology. Many disabled person’s use of wearable tech is so intertwined with their own lives that it will become increasingly difficult to differentiate between human, wearable tech, or even cyborg.

**IP Trolls**

[Enter simple introduction and short explanation of what IP Trolls are and how they have affected patent protection].

**Legal Issues in Litigation**

 One of the features driving the market in wearable technology is their ability to constantly track information which, privacy concerns aside, allow consumers to passively collect and get new information on their activities. However, depending on what type of information your particular gadget is collecting, the resulting data could be both beneficial or malignant depending on which side of the issue you are on. One particular area of litigation where wearable technology has a lot of potential is during discovery to recover Electronically Stored Information (ESI). Privacy issues aside, wearables have the ability to store information that could be critical in litigation and raise questions of where exactly the information is stored (e.g. locally or in the cloud) in order to retrieve for discovery.

For example, in a personal injury case a plaintiff is claiming that injuries sustained during a company ski trip prevent him from participating in certain physical activities such as running. However, say the plaintiff had been wearing a fitness tracking device, e.g. Fitbit, which have recorded many of his long 10 mile runs. The discovery of this information would be highly detrimental to the plaintiff however practiced litigators will need to be well versed in the proper way to obtain such ESI assuming that there are legal procedures in place to provide the proper obtainment solutions. This will require the discovery net to expand to ensure that data mined from wearables is legally discoverable.

Potential Solution

One potential solution is for in-house attorneys to become well-versed in any new laws regarding ESI discovery so that they are well versed in the appropriate manner by which information can be obtained.

**Patent Protection**

At the heart of the legal issues regarding wearable technologies is the issue of patent protection and what the USPTO should allow regarding the broadness and applicability of patent claims. In addition to patent trolls, many companies also face a relatively similar problem arising out of non-practicing entities (NPEs). On the opposite end, the issue of the breadth of power and protection that a larger companies patent portfolio may yield is also undecided as of yet. As such, companies such as Apple, Google, Samsung, Microsoft, and HTC have already started to amass a diverse patent portfolio to best position themselves for success and to capture the potential of the emerging wearable market.

With regards to NPE’s, NPE’s have only recently entered the fray of alleging patent infringement as there have been relatively few mainstream products created until recently. NPE’s are companies that have existed in the past and while the company may no longer exist, their patent does, giving the NPE an avenue to sue for patent infringement. For example, an NPE named SportBrain recently sued Adidas, Fitbit, and Nike citing patent infringement over a patent titled, “Integrating personal data capturing functionality into a portable computing device and a wireless communication device.” As we can see, the sheer broadness of this patent title allows for the SportBrain to insinuate its applicability to any number of inventions as any piece of wearable tech like the FitBit or Apple’s iWatch clearly captures and stores personal information (blood pressure, temperature, etc.) while encapsulated in a portable device that is wireless. It isn’t difficult to

Because relatively little litigation has occurred with regards to wearable technology, it hasn’t been put to test exactly how broad certain patent applications are and to what degree one has to sufficiently explain their invention in order to gain protection.

**Issues with Trademarks**

IP issues with wearable technology will not be solely confined to patents, but will also affect trademarks for instance how will courts handle competing marks in different jursidictions (e.g. how many ways can you make glasses?), branding of products and ideas in virtual environments, and trademark enforcement in the domain name space which continues to grow at an exponential rate.

**Merging with the Fashion World**

In the past, IP law has tried to keep design and patent law separate from each other, however wearable technology may very well be the straw that breaks the camel’s back and merges the two together. Apple may have started this trend by making turning the iPhone into almost a status symbol as signified by its refined design while still boasting very impressive technology. Steve Jobs himself said once that, “[I]t’s not just what it looks like and feels like. Design is how it works.” The more design becomes integrated with how the product/invention works, the more legal issues will arise.

**Conclusion**

[Review of the social and economical implications of wearable technology and a wrap-up of potential solutions]